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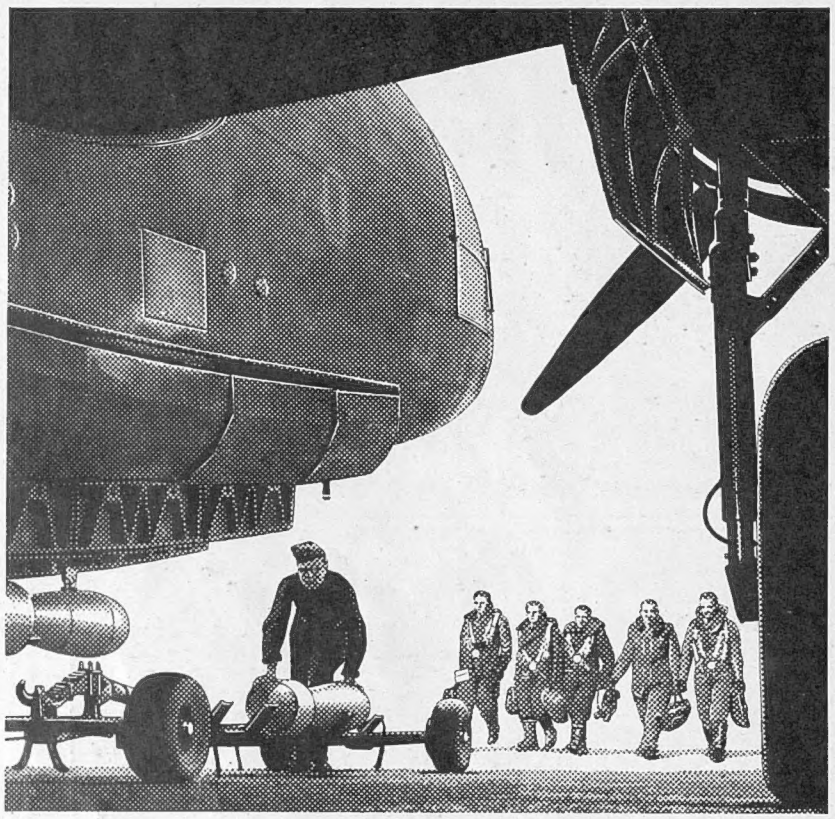

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THE SPHERE
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The Empire's Illustrated Weekly
London, February 1, 1941

LORD HALIFAX LEAVES FOR THE UNITED STATES—THE SCENE AT THE QUAYSIDE, IN A HEAVY SNOWSTORM

Both the departure from this country and the arrival in America of Lord Halifax, Britain's new Ambassador to the United States, were kept a secret from the enemy. Not until he had arrived safely in Chesapeake Bay was the news made public; and then it was also disclosed that Lord Halifax had made the voyage in Great Britain's new and mightiest battleship, H.M.S. *King George V*—the first intimation that this most powerful vessel was actually in commission. The point of departure was a northern base in Britain. Here a number of Cabinet Ministers, at the head of whom was the Prime Minister, had assembled to see him off. The picture we reproduce here shows the scene as Lord Halifax boarded the tender which was to take him off to the battleship. Snugly ensconced in the tender's cabin is Mr. Winston Churchill, whilst on the deck below are Mr. Harry Hopkins, the U.S. President's personal envoy in Britain, and Mrs. Churchill. The actual journey across the Atlantic was uneventful, and no attempt was made to cross at full speed. On the arrival of Lord Halifax in the United States, President Roosevelt took the quite unprecedented step of going out to meet the new Ambassador

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A WAR NEWSLETTER —No. 74

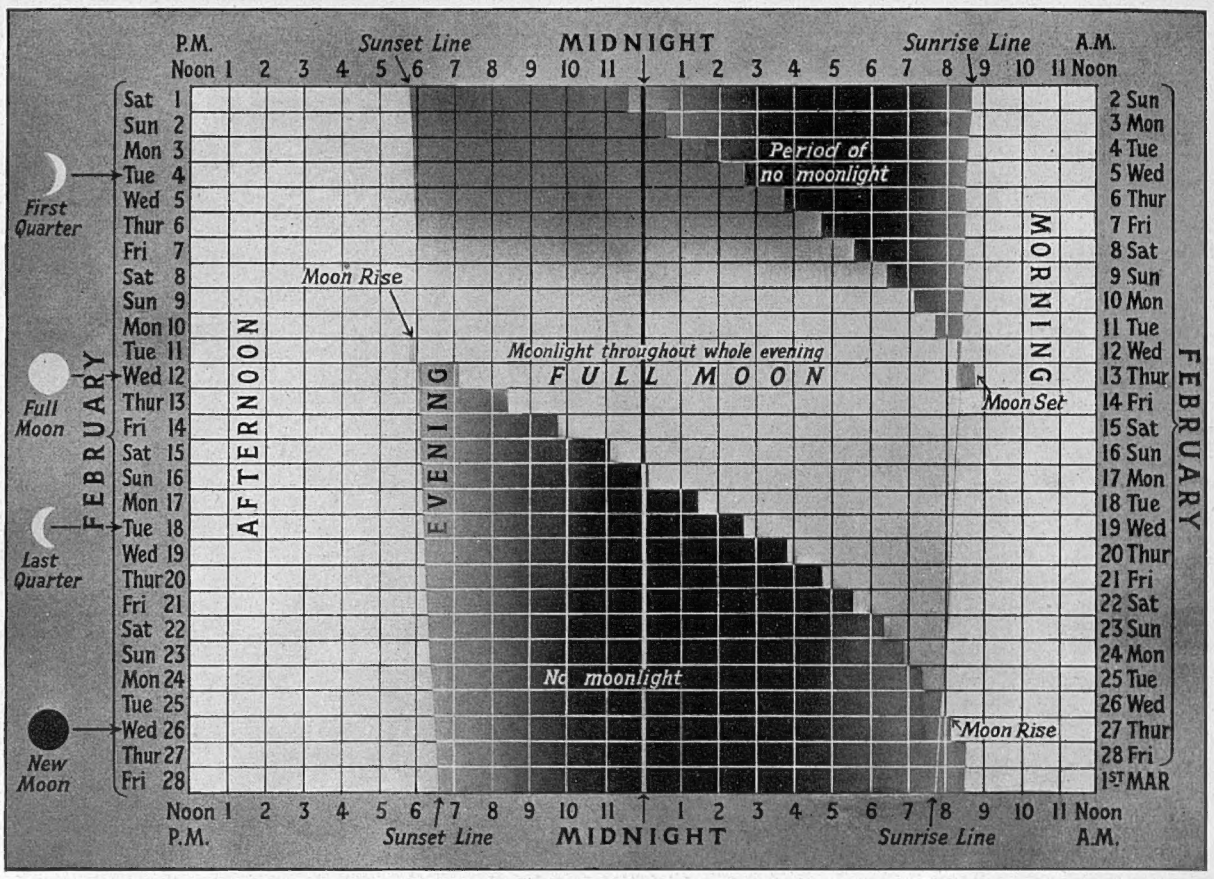
32-34, ST. BRIDE STREET, E.C.4.

NEWS FROM ENGLAND.

—I wrote the other day about the sparsity of real facts out of Germany. Plenty of rumour, plenty of wishful thinking, but of facts which satisfy our logic and common sense and *ring true*—very, very little. How odd it is that it is much the same with news from England to England—from one county to another! Yet so it is. Our radius is five miles from our country town, and the doings of Essex are little known by Kent, and Cumberland knows less than nothing of its friends in Dorset. Which is the most vivid proof that this war is like no other war in our history. How we wait on the postman, who does not keep us waiting longer than conditions dictate; and then, how seldom our friends use him! Somehow, with the press of war work, one's fingers revolt from writing what is not essential; and again, somehow, though the need of a *good crack* with an old friend grows often insistent, one cannot put one's thoughts into words on paper and, as for one's doings, are they not stereotyped, common to all, and not worth the telling? But when a letter comes from a friend, how welcome it is, how carefully studied and how it helps to complete that never-to-be-completed jigsaw of the life of a nation at war to the death! So I heard that my friend X—formerly a Cambridge Don—is a section Intelligence Officer in the R.A.F., a willing servant of "mere boys" who are doing the active stuff, and proud enough to see sometimes the 'ooves of the 'osses when the tent-flap is lifted. He is billeted on strangers far from his home, and when he gets a week's leave, his whole time is spent on household chores—cutting wood for his family, doing amateur patchwork plumbing—and he finds himself coming back from Army plenty to the strictly rationed diets and the "cannots" of civilian existence. His own children must go without, while he subsists on superfluity. News filtered through at last of my near relation Y, of whom I had not heard for a year. He is a notable writer of biography, but for six months he has been fighting fires at night in Kensington and lifting rubble from the tombs of imprisoned Kensingtonians, and his *magnum opus* is stored, half-done, in his own cellar. And little Z—that valuable patron of the beauty parlour and the night club—is driving a lorry through Bristol of nights, and cranking it up in the icy dawns. It is good to hear of them—one's own war job hides a diminished head when it meets the jobs being tackled by one's friends and contemporaries and by the little "pretties" of one's acquaintance.

COLONEL R. BINGHAM.

—Colonel Bingham will probably have cause to remember ruefully that "half-sheet of paper" whereon an unwise man "had the honour to state." He made some trenchant remarks about the "new" officer and his inability to look after his men. What he said was well intended; it sprang from intense keenness and from the Guards' tradition. In spite of Mr. Belisha and a continual advance towards "true democracy," the silent opinion of the Army is still based on the old tradition, and still the old school tie peeps out whenever it may, behind the buttoned neck of the new battle-dress. Indeed, the old Duke of Cambridge still rules the Army, *sub-rosa*, beneath a rod of iron and, being very dead, yet speaketh. The truth is, that in war, and in this war particularly, there are things which cannot be said, even if true. I sometimes wish that Ministers as well as soldiers knew it. Our democracy has never yet been *real* in any general sense, and while it forges ahead towards such reality as may be, still in peace or war there are things which must not be said. The old school tie is still a red rag; and while we strive to eliminate class feeling for the duration or beyond, sensitive skins and minds suspicious of slights are ever present and ever vulnerable. The sure knowledge that the Higher Command of the Army secretly endorses every word which fell from Colonel Bingham's pen may not entirely comfort him in the trouble resulting from his putting his opinions on that "half-sheet of paper." The "Dook" is kept in a cupboard in the W.O., and only taken out and dusted behind locked doors. And he was not altogether a fool, albeit something of a muddler, a stiff-rump and a grenadier. But it doesn't do, Colonel Bingham, to allow to escape a private opinion that the public schools produce the best type of officer, even though that opinion only covers the Army.



"THE SPHERE" MOONLIGHT CHART FOR FEBRUARY

A definite increase in the period of daylight is shown in this chart, as the toned band denoting the hours of darkness narrows perceptibly towards the end of the month. The period of full moon falls rather early in the month, with the first quarter on the night of the 4th. The full moon rises at about 6 on the night of the 12th and, should the sky be cloudless, will be visible till daybreak. The period of darkness in the evening then increases, and on the 16th there is no moonlight before midnight. The last quarter makes its appearance in the sky at about 2.45 a.m. on the morning of the 19th. The night of the 25th will be totally dark throughout, as the sun rises slightly before the moon

A limited number of these charts will be supplied free of charge on application to the Publisher, "The Sphere," 32-34, St. Bride Street, London, E.C.4, but 2½d. in stamps must be enclosed with the application

MR. BOOTHBY.—It is an unpleasant story of financial façade-making which is revealed by the Boothby Committee. No one desires to hit a man when he is down, and Mr. Boothby is down; and should be out—of politics. Rare as such cases are, however, come-backs are often staged on the political boards, and perhaps Mr. Boothby will be Boothby *redux*. If the procedure of such a commission goes beyond what is possible in a Court of Law in the matter of taking and accepting evidence, no defendant could obtain a more favourable hearing, at which every possible point in his favour would be (and was) brought out and given weight. Mr. Boothby has been found guilty of conduct prejudicial to the quite high standards which the House requires, and the country demands, of its members. When that member is a Minister, and when the country is engaged in a struggle for survival, the standard demanded is sterner still. Then, indeed, the conduct of an M.P. must be irreproachable, or the institution of Parliament must suffer a shattering blow. There is no worse start in these days for a political career than brilliant promise combined with extreme youth. Spoiling inevitably results from the combination; and the phenomenon is too often a nuisance. Mr. Boothby is still young. In his extreme youth his path was strewn with many primroses, for he was an only child of great promise. But life always brings correction even to the spoiled darlings of fortune, and Mr. Boothby has had in life some bitter lessons. I feel, no doubt, that his experience, his comparative youth and some excellent points in his character will all help him to build up again his shattered career on sounder, simpler and, I hope, non-political foundations. There is any amount of *cant* always current on questions of morality in business, as well as in social conduct, and it rises to a climax whenever an individual's dealings come under review. Let us admit that "the City," "Finance," or what you please to call it, conducts its affairs, not under one set of standards, but under many. Firm X, or individual X, often has an easier conscience than firm Y, or individual Y, and they retain a measure of respect among their fellows while the going is good. There has been already a good deal of *cant* about Mr. Boothby; but for his political circumstances and the *times*, much less would probably have been said or heard about the case, even if it had come to investigation. Let us leave it there.

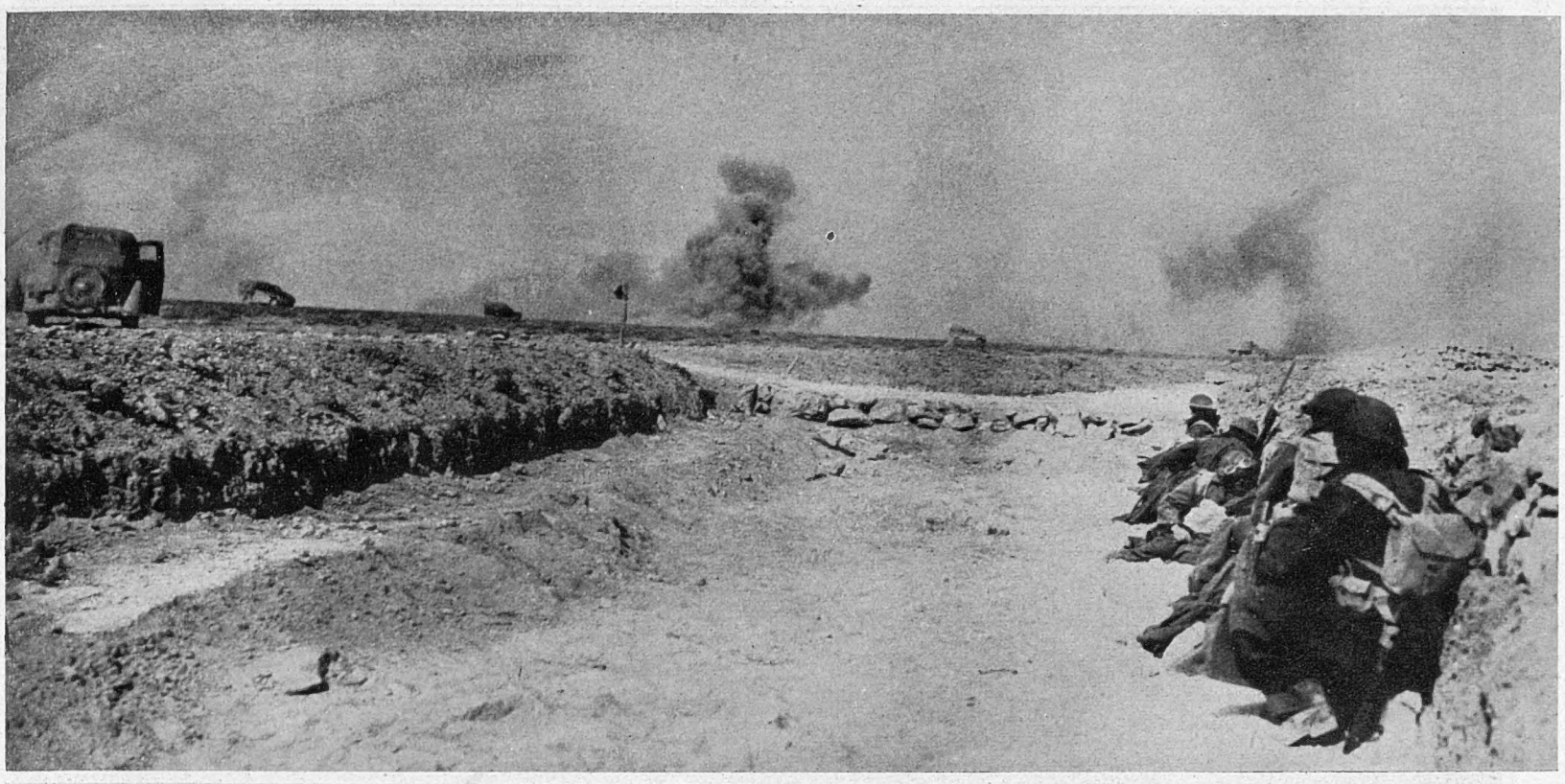
LONDON SHELTERS.—

Certain recent articles (notably one by Lord Cranley) describing conditions in London shelters, public and private, have been frank and disturbing to the limit. I suppose there exist few more difficult social problems in war-time. Some of the conditions which vitally endanger the health, the morals and the fine spirit and unanimity of the nation as a whole can never be got rid of. A mode of existence so utterly remote from the experience of any, however perfectly it be organised, is bound to produce unforeseeable reactions and many evils. This war has brought out the best in human nature, but it has not totally destroyed the seeds of what is base and frail. They lie dormant, and, as seeds will, they germinate underground. It would have taken ten years of planning and hard labour to create a dozen underground cities, proof against bombs, and nothing short of that provision could have totally removed the present dangers. Government and many local authorities have worked with a will, and none can deny that almost miracles have been achieved. Yet those who know least about life on winter nights in City shelters shudder at the picture which imagination conjures up. And (for once) the imaginative picture is probably less, and not more, terrible than the reality. No doubt a single responsible authority, the expenditure of many more millions of money and many more months of labour, could achieve notable improvements, and reduce many of the dangers inherent in this unnatural, still ill-organised existence in holes in the ground. But if unity of control were achieved, the money spent and well spent, still at the end of another two winters the terrible injuries which this barbarity of modern war is causing to the health and morals and patriotism and resolution and unity of the nations at war must continue, and leave their marks. Amid the horrors and damage visible on every side, there are none more permanent, than those inherent in City shelters.

AIR-RAID SHELTERS AND SCHEDULE A.—

I wish some reader versed in the laws affecting income-tax and so forth would give me a ruling on the question of air-raid shelters and Schedule A (1) and (2). If you build in your garden—as the authorities advise—a brick-and-concrete shelter for your family, is the outlay on it to be accepted by the I.T. authority as "repairs and maintenance" to your property, to be proportionately set off against the gross claim under Schedule A? Or, contrariwise, will the shelter be pounced on by the local rating authority as an "improvement" (as who should say a swimming-bath), and noted against you for a raising of your rating assessment next time? The I.T. authority always answers such queries with Sphinx-like ambiguity—if it answers at all. Yet the provision of the shelter depends on a confident answer. What is the answer? Unless it be favourable to the house-owner, here is one department of State contradicting and stultifying the declared policy of another. One more query from an ignoramus to an expert. May compulsory and voluntary war damage insurances be set off under "insurance" against claims under Schedule A?

THE OLD STAGER



AUSTRALIANS SHELTERING IN AN ITALIAN "ANTI-TANK DITCH" AND AWAITING THE FINAL ASSAULT ON BARDIA: Great reliance was placed by the Italians on this, and similar, defences at Bardia—as, in fact, at Sidi Barrani and Sollum likewise. What the enemy did not appreciate was the strong force of tanks which had been accumulated for the attack. In the above picture, beyond the crouching Australians, shells are actually bursting within the Bardia defences

THE COMMANDER-IN-CHIEF SEES FOR HIMSELF: GENERAL SIR ARCHIBALD WAVELL, IN SUPREME COMMAND OF ALL OPERATIONS IN LIBYA, WITH MAJOR-GENERAL R. N. O'CONNOR, COMMANDER OF THE DESERT FORCES, ON THE ACTUAL BATTLEFIELD AT BARDIA

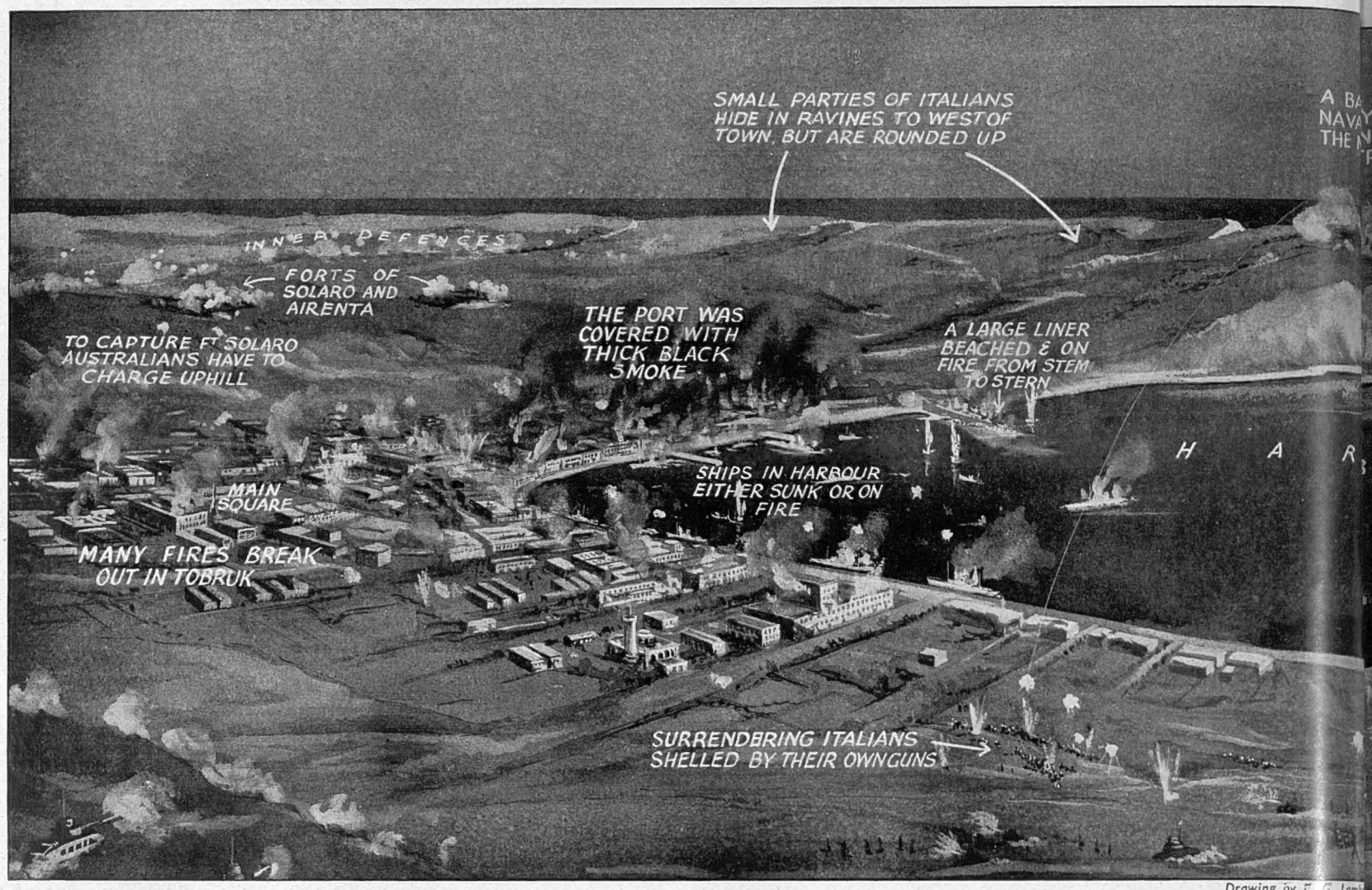
HOW THE "ANTI-TANK DITCHES" WERE SURMOUNTED: Sappers filled in the defending ditches at various points so that the tanks and other mechanised vehicles could cross. Here they are watching the easy passage through the defences of small tanks and Bren-gun carriers

AFTER BARDIA

How the "Bastion of Fascism" was Captured by Storm

On this, and on pp. 132—135 and 154–55 of this issue, we publish many striking pictures, from official sources, of the great victory at Bardia. These will serve to underline the reports of British war correspondents and to visualise for our readers the conditions under which British and Imperial Forces in the Western Desert are now operating

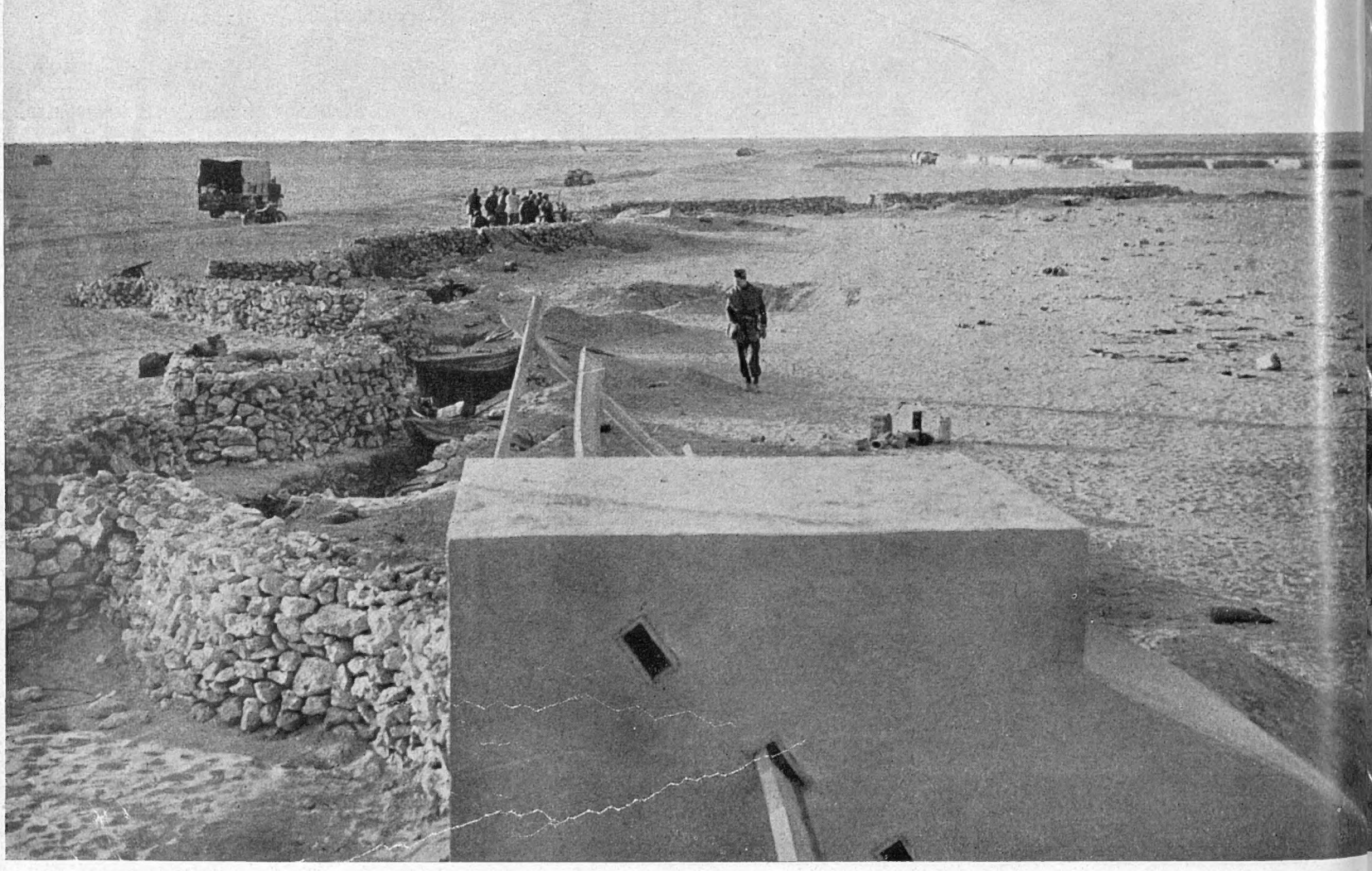
A CAPTURED GENERAL ASKS WHAT HAPPENED! The man in the centre of the picture (in leather jacket) is an Italian Brigadier-General captured at Bardia. He seems anxious to know exactly how it all came about. The proportion of Generals and Staff officers captured in the operations in the Western Desert was quite high



Drawing by E. G. Lamb

THE STORMING OF TOBRUK ON JANUARY 22-23—HOW THE TOWN AND HARBOUR WERE CAPTURED AFTER THE DEFENCES HAD BEEN PIERCED

The penetration of the two semi-circular lines of defence at Tobruk was accomplished with the same lightning dash as that which characterised the victory at Bardia. The whole action at Tobruk did not last longer than 36 hours, and the casualties on the British side were again remarkably small. The Australian sappers succeeded in cutting the barbed wire of the outer defences and through the gaps poured the tanks, again taking most of the defenders' positions in the rear. By noon of the second day Australian troops were in Tobruk. It is this latter part of the action which is set forth above. The infantry had gone on, writes one correspondent, to the last ri overlooking Tobruk "with the quick step of the conqueror," despite 40 miles of fo t slogg in two days. "A large liner lay at anchor, ablaze from stem to stern. Smaller craft which we tied up alongside were also in flames. Masts and funnels of sunken vessels showed above surface. The cruiser *San Giorgio* lay disabled in the harbour-mouth, and on the so th side oil-tanker burned furiously. A few men wandering through the town were the only si ns of li

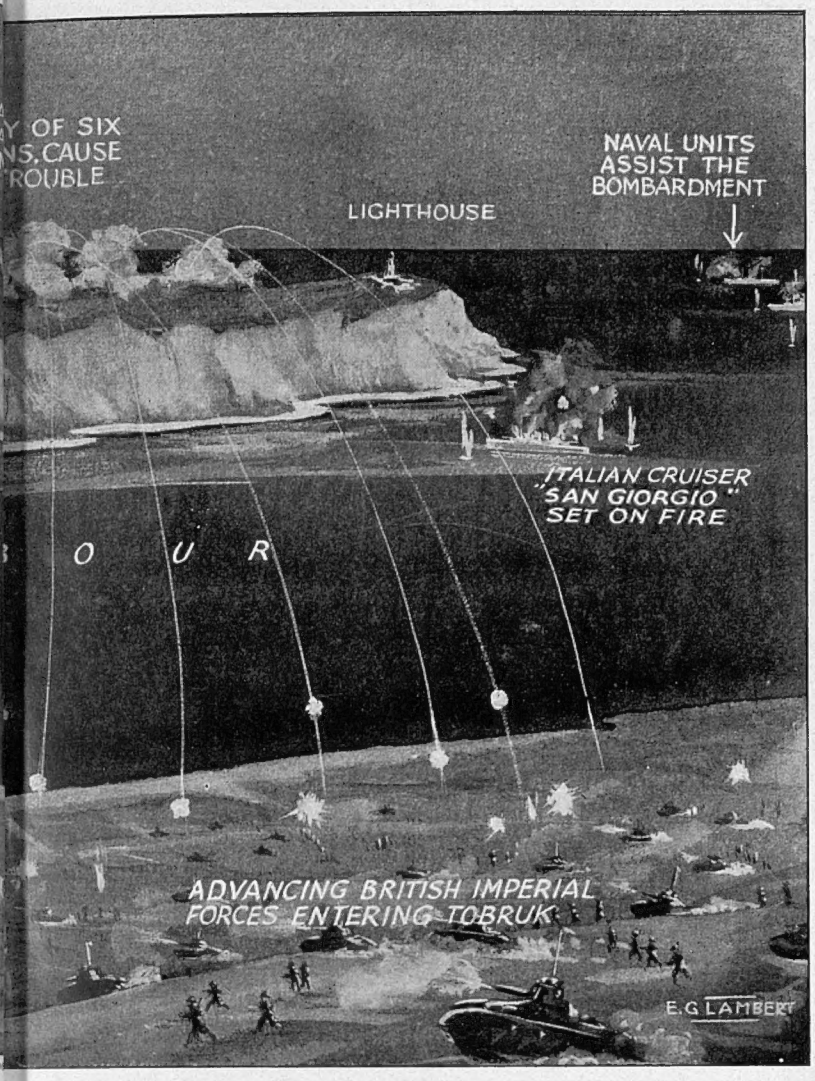


AFTER THE CAPTURE OF BARDIA ON JANUARY 5: WHAT THE "PERIMETER DEFENCES" LOOKED LIKE—*An Official Photograph*

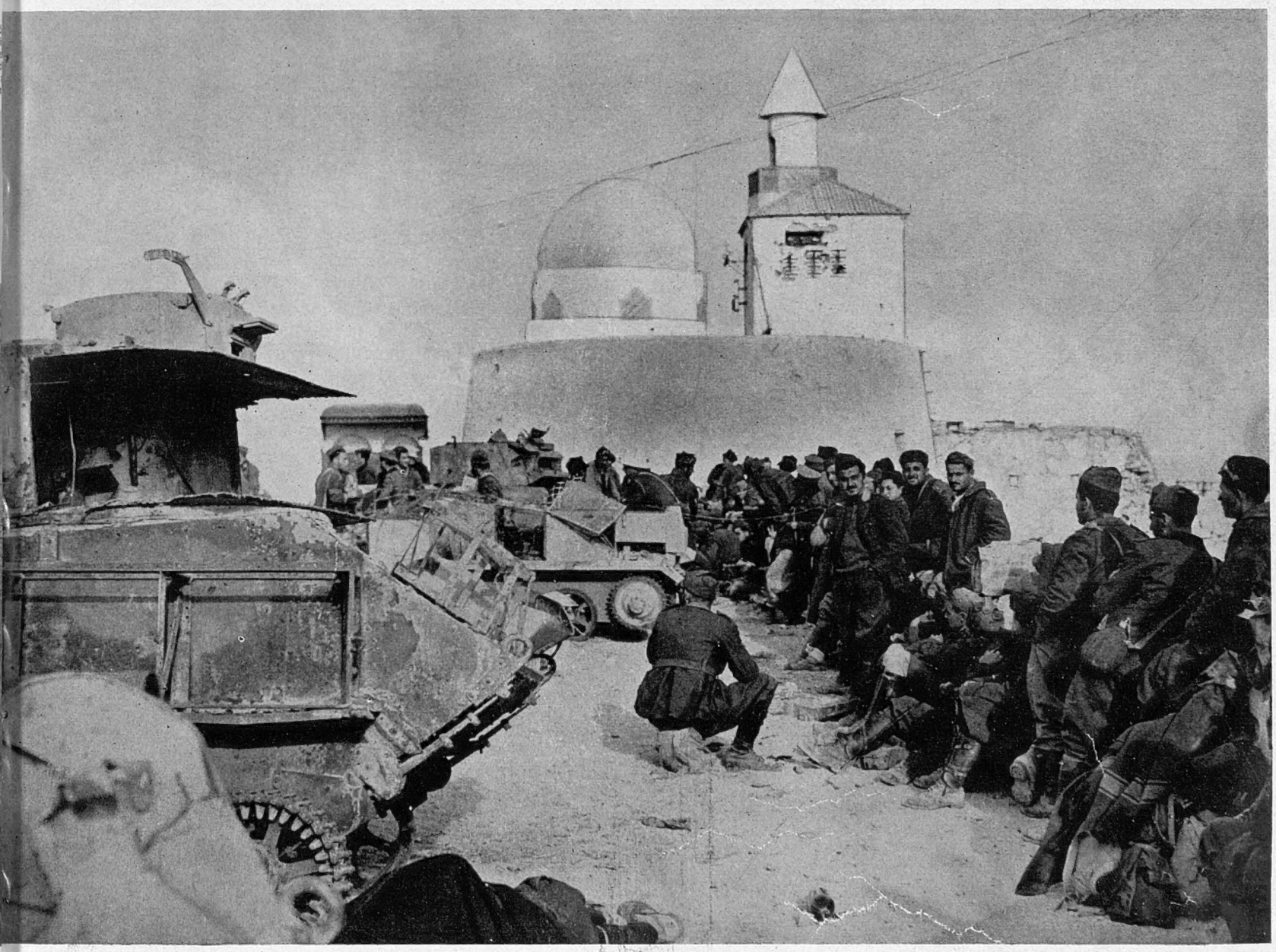
In all the reports from the Western Desert the war correspondents have frequently referred to the "perimeter defences," the line of entrenchments running round the towns of Sidi Barrani, Sollum, Bardia and Tobruk. Here is a view of these defences: they consist for the most part of a trench-line such as that shown above. In front of the trenches are breastworks of piled-up stone, and at intervals strong points consisting of concrete "pill-boxes" for machine-guns: addition, anti-tank ditches had been dug in a continuous line, and barbed wire figured prominen throughout the whole defensive scheme. Once reinforcements had been brought up, however, whole defence collapsed: this has been tru throughout the whole of the campaign so

THE FALL OF TOBRUK

And a Series of Official Photographs Showing Scenes in BARDIA AFTER ITS CAPTURE by Imperial Forces



A "WADI" CROWDED WITH STRANDED ITALIAN LORRIES AT BARDIA: The North African terrain is creased with numberless gullies or *wadis* like the one above: they have been used by the Italians for defensive works and for concealment. After the fall of Bardia these lorries were discovered hidden in one of the nearby *wadis* and were included in our list of captured war material

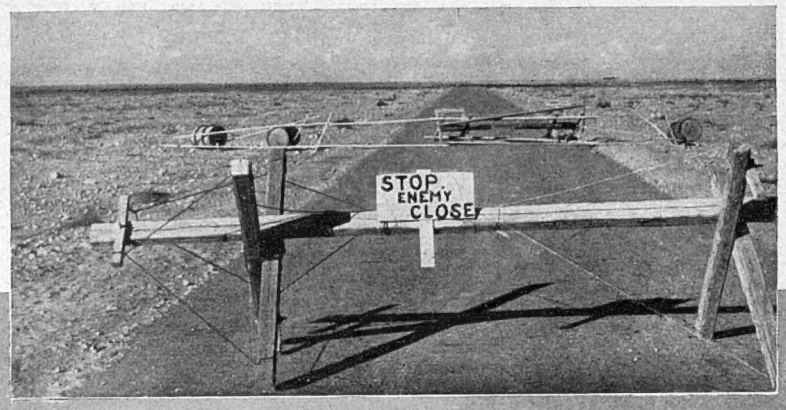


WITHIN THE FORTRESS OF BARDIA: ITALIAN PRISONERS WAITING ALONGSIDE THEIR RUINED TANKS FOR REMOVAL TO THE BASE

General Bergonzoli (whose genius for escape is amazing, even if it means the abandonment of the troops supposed to be under his command) had assured Mussolini—so it is stated—that Bardia was impregnable. This was a week before it fell. In the event, Bardia fell very shortly after it was attacked by the British Imperial Forces and some 38,000 prisoners were captured, including a number of Generals and high Staff officers. The rank and file made very little objection to their capture; in fact, they seemed to welcome the cessation of the pitiless bombardment, and awaited their despatch to the bases at the rear with relief. This picture was taken after the occupation of the "Bastion of Fascism," as it was described on the radio by the Italians themselves: the men are the crews of the tanks seen on the left. Both tanks and crews were later sent back to the base

COMPLETE VICTORY AT BARDIA

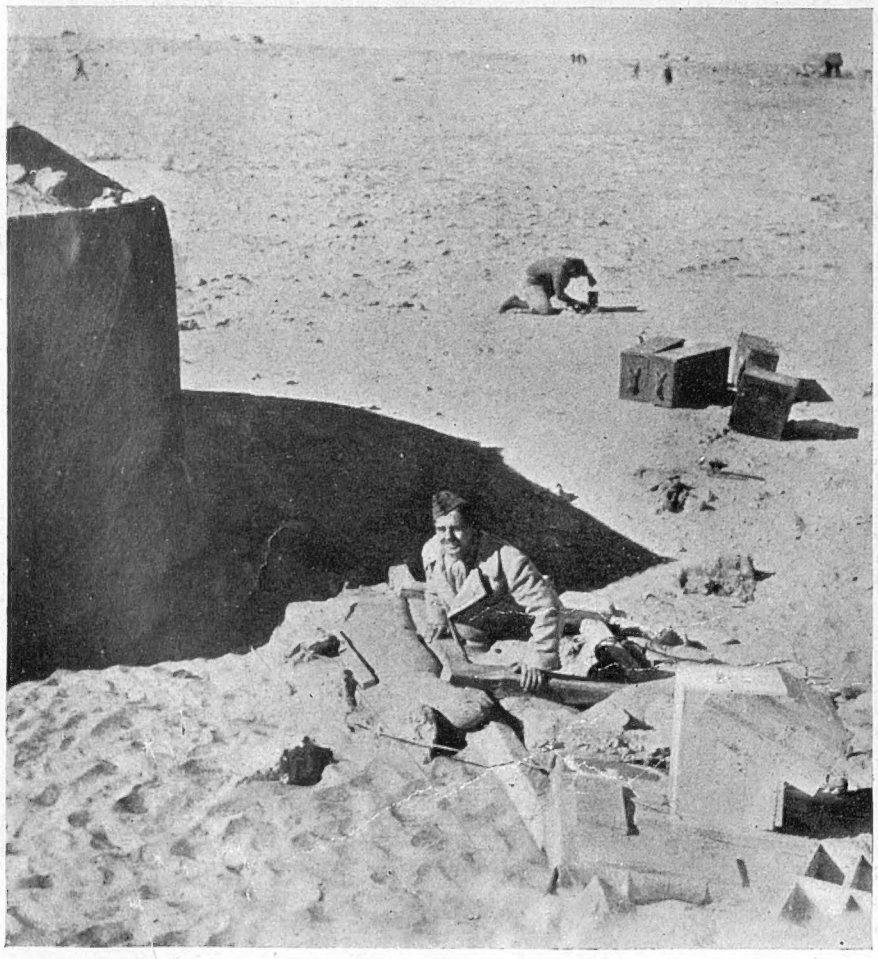
More Photographic Evidence of the Complete Italian Collapse in the Western Desert



On left—**A BARRIER ON THE MAIN CAPUZZO-BARDIA ROAD BEFORE THE FALL OF THE LATTER TOWN**

BARDIA—DAWN, JANUARY 5, 1941: THE AUSTRALIAN TROOPS ADVANCE TOWARDS THE DEFENCES AT THE DOUBLE: Bardia was really taken on the day preceding—when Australian troops had pierced the perimeter defences, crossed the anti-tank ditches and occupied most of the strategic points. On the 5th the work was finally completed; and the official communiqué was able to state that the whole of the defence works, fort, harbour, and town were ours

BARDIA—DAWN, JANUARY 5: MOVING UP TO THE ATTACK, THE AUSTRALIANS APPROACH THE TOWN IN OPEN ORDER AND WITH FIXED BAYONETS



On left—**A BRITISH OFFICER EMERGES FROM AN UNDERGROUND H.Q. IN THE DESERT: THESE QUARTERS WERE CUT DEEP BELOW THE SURFACE, AND OCCUPIED DURING THE PRELIMINARY OPERATIONS BEFORE BARDIA**

Above—**ITALIAN PRISONERS PERFORM USEFUL WORK ON THE BATTLEFIELD: A PARTY OF THEM ARE HERE SEEN CARRYING A WOUNDED BRITISH SOLDIER FROM THE FORWARD LINE TO A CASUALTY CLEARING STATION**

AN ENDLESS STREAM OF ITALIAN PRISONERS LEAVING BARDIA ESCORTED BY A FEW BRITISH SOLDIERS AND LORRIES : This picture was taken at the bridge spanning the Wadi Maaten el Bardia : it shows an almost endless line of prisoners. As an illustration of their docility, "we overtook an enormous column headed by a solitary lorry," states one correspondent. "The driver told us that he and four guards were in sole control of these prisoners, numbering 3,000." In the above picture it is amusing to note the big bags carried by some of the prisoners—evidently in preparation for a comfortable sojourn in the concentration camp !

A RUINED ITALIAN TANK ABANDONED IN FRONT OF BARDIA : GROUPED AROUND ARE THE CREW, AND OTHER ITALIAN SOLDIERS—ALL WAITING TO BE ESCORTED BACK AS PRISONERS OF WAR. THIRTY-EIGHT THOUSAND OF THE ITALIAN DEFENDERS SUFFERED THIS FATE *(Further pictures from Bardia on pp. 131—133 and 154-55 of this issue)*

LAWRENCE OVER ABYSSINIA

The Most Interesting of the Eastern Theatres of War is Ethiopia. What is Going on in that Crumbling "Italian Empire," which was Conquered by such Inhuman Methods, is here Discussed

By FERDINAND TUOHY

JUST five years ago, when Emperor Haile Selassie's armies were making their fatal error of fighting fixed battles with Badoglio's murderously-equipped invaders, instead of concentrating on hit-and-run, guerilla tactics, many shared a common sigh: "If only Lawrence were still alive and out there!"

Imaginative American editors, on the strength of Fascist and Nazi tales, decided that Lawrence actually was in Ethiopia; that his reputed motor-cycle death in May 1935 had been an Intelligence Service blind to cover up planned future activities on the "victim's" part. I was myself invited to proceed to Abyssinia, weighted with dollars, if I could adduce reasonable evidence that the great T.E. was indeed still of this world.

Well, so much is certain this day: as the magical inspirer of revolt in the desert sleeps on in a little Wessex graveyard, his spirit planes over revolt in the bush in Abyssinia.

When we read of the sixty-year-old colonel in charge of the British Mission in the heart of this wild and mountainous country and of his sitting down with dusky chieftains to a feast of spiced meats, honey and wine; when we hear tell of the younger major of the Sudan Defence Force flying blindly to contact him by means of stones heaped on the ground; or of young Australian and Rhodesian officers and N.C.O.s training native bands in jungles and gorges, and of famous white hunters leading them on the trail of the Italians; of camels swaying fleetly through the night piled with explosives for wrecking, of money-chests of gold being dropped from the skies, of a waiting Lion of Judah at Khartoum even as a Feisal waited in Arabia—who does not harken back to that "Aurans" (or "Lurens") who did all of these things in 1916-18 while trying to succour another great race of the past? If ever men had image to inspire them, surely they are those now spreading revolt against the Italians?

In these pages at the time I wrote an article imagining how Lawrence might have operated in Abyssinia had the Emperor and his Rases sanctioned him. I little dreamt that within so short a time so much would be coming true:

"Here were loose bodies of men requiring to be galvanised into a striking whole, needing to be exceptionally led in guerilla fighting dear to their hearts, requiring a symbol and faith in their star. What might not Lawrence have done with a Ras Desta, Seyoum or Kassa—he who gained power because he represented the heart of the Arab movement, vitalising that cause, who could do everything and endure everything just a little better than the Arabs themselves? Lawrence would have re-installed his entirely original guerilla warfare. He would never have allowed four separate armies to mass. 'Last stands' would have been utterly ruled out. In his Manual of 27 Articles Lawrence bequeathed his rapid night methods to shatter an enemy, and these had succeeded in latitudes not far distant.

"Substituting dispersal for concentration, Lawrence would have avoided a clash with too many Italians until such moment as these had expanded precariously: then he would have pounced now here, now there, losing a minimum of men himself—he who never had more than 3,000 men under him, yet with so few had immobilised ten times as many Turks. For the fixed tragedy of an Amba Alagi, there would have been substituted 'a creeping paralysis produced by an intangible ubiquity' exerted by a master of mobility and surprise. Disorganise! Embarrass! Wreck lorry convoys as once he used to 'kill engines' on the Mecca-Medina line."

Quite so. Only—you may have noticed a flaw in the above. At any rate, a distinguished military critic did. "Very interesting," he wrote, "but haven't you omitted the main weapon upon which Lawrence would have relied? Unless I am profoundly mistaken, he would have gone all out for the aeroplane. By fair means or foul he would have begged, borrowed, or stolen (say) a couple of hundred machines (whereas Haile Selassie hasn't a single one). With these L. would have concentrated on Badoglio's lorry convoys, unique targets."

To-day, as the spirit of Lawrence planes over Abyssinia, those aeroplanes are coming—from the Sudan and Kenya.

At Dangila an entire squadron of heavy planes circled over the Italian strong-point and leisurely blasted their objectives without loss. The news spread with such effect that within two days thousands of irregular Banda employed by the Italians deserted to the Emperor. As for the general run of natives, these are being additionally united by the dissemination on a vast scale of a one-page newspaper called *Banderachin*—Our Flag. Lawrence never ran to that form of luxury.

Back in 1936 the Abyssinians cracked under the twin terrors of the low-bomber and of mustard gas sprayed from above. Badoglio's invincible air force won the day and resistance was short. To-day the boot is on the other foot. We have got (or shortly shall have) air ascendancy, while the massing of natives in positions vulnerable to bombing will be absolutely forbidden. The task of the Emperor's men is clear-cut. It will lie in protecting incoming mule and camel caravans bringing arms and munitions, in hit-and-run tactics, in sealing up Italian garrisons at various points where they will be subject to *our* bombing, and in seeing that communications are cut and re-cut.

We want to bring Italy down at the very earliest possible moment. *We've got to.* Right. The one sure way is to collapse Mussolini's African Dream, while at the same time conjuring in Italians at home one rising anguish over the fate of their compatriots in Abyssinia, and no pretty fate can anyone expect it to be, unless the beleaguered forces of the Duke of Aosta should contrive to surrender directly to whites.

We have to remember that the Duke of Aosta's only contact with Italy is now by wireless, which is always subject to interception, while no code has ever been proof against unravelling.

So on with Revolt in the Bush! In the jungle and on the mountainside, in black granite gorges and on the high plateau; and before the rains come, in June. Not that these celebrated rains, lasting until October, should interfere to anything like the same extent with our guerillas' operations as they would have done with Badoglio's had not Mussolini waited until they ceased.

It is good to learn that much of the enormous fighting equipment taken in the Western Desert is being rushed into the hands of the Abyssinians, who are receiving British experts to train them in the use of modern weapons generally.

On with a Lawrentian war of mining roads and sabotaging enemy columns, of distributing golden largesse (T.E. used to call this "going shopping"), of bobbing up here and there where least expected, of gorgeous, impudent thrusting in momentary superior number, of co-ordinating the guerilla tactics inside Ethiopia with our military, and, above all, with our aerial activity from the fringes of the country. On with the promotion of wholesale desertion, notably among the Italian native levies, and with the benign and highly valuable dropping of medicaments with instructions in their use; to say nothing of plane loads of Marie Theresa dollars, still valid currency.

Skilfully guided internal revolt is three parts of the game; without it, the campaign could drag out interminably in a land of immense natural obstruction and seven or eight times the size of Britain. But, given this guidance of millions justifiably moved to a fanatical hatred, it should not be too much to hope that inside of a few weeks the Italians will be hemmed in in half-a-dozen fortified positions such as Addis Ababa, Harrar, Gondar, Makale, and Sasa Baneh. And that in these and a few other places they will have to stop, if only on account of paucity of petrol and munitions for the offensive. Food they are believed to have stored in abundance.

One summer's night in 1936 I joined the subdued "bravos!" as an emaciated, black-bearded and black-gowned figure moved haltingly from Geneva railway station. Next day we watched the Emperor confront the Council of the League, including Lord Halifax, and we beheld those eight men babbling legalities and turning down Haile Selassie's appeal.

No retribution could be juster than that seemingly about to be exerted by the Negus upon Mussolini, who first shepherded his intended victim into the League and then fell upon him in defiance of everything laid down by that institution; and whose own son was to exult (of the bombing of tribesmen) that "the group opened up like a flowering rose—most entertaining."

Was ever language used more devilishly?

"Groups of nine, fifteen or eighteen aeroplanes," added the Emperor that day of Genevan doom, "sprayed a continuous sheet of poisonous gas across the countryside. Thousands of soldiers, men and women and children and cattle were killed; rivers, lakes and pastures were poisoned. Living beings died, and the water and pastures were useless. So that even men drinking from polluted lakes died in agony."

The recovery of Abyssinia for its rightful owners fortunately is beset by no snag or a pitfall of the kind that was to ruin so much of Lawrence's work in Arabia, or ruin this in his own eyes anyway. There exists nothing affecting Abyssinia, like the secret Sykes-Picot Agreement governed the eventual sharing-out of Syria and Damascus. Lawrence felt he had let the cheated Arabs down. His successors need have no qualms in such direction.

IN ABYSSINIA—THE SORT OF CONCENTRATION WHICH IS, AT THIS VERY MOMENT, BEING BOMBED AND HARASSED BY BRITISH PILOTS AND NATIVE LEVIES: Abyssinia is a very big country and the opportunities for surprise are considerable. All over the country Italian centres and concentrations are being harassed—and this guerilla movement, coupled with R.A.F. bombing, will not slacken as the weeks lengthen. This picture was taken between Addis Ababa and Dessi, and shows the evening assembly of road-construction workers. Here are gathered the hundreds of lorries which carry the soldier road-workers who bivouac in wagon-laagers. At such a point there must, of course, be a large petrol store—a first-class target for the bombers. "Soon huts of corrugated iron will arise here—camp-followers and traders will follow, and from a blank, nameless spot a new town may arise on the 'Imperial' highway . . ." say the Italians. And, we may add, what a target for guerillas and R.A.F. alike!

ITALY'S ETHIOPIAN EMPIRE

THREATENED FROM WITHIN AND WITHOUT

—A Special "Sphere" Section

THE TYPE OF WILD ABYSSINIAN SCENERY IN WHICH THE BRITISH MISSION IS WORKING FROM WITHIN : For several months parties of British officers have been maintaining contact with Abyssinian chiefs in the heart of the country. They have been advising them on the best methods of warfare against the Italians. So loyal have the native chiefs and their followers been that no effort of treachery has revealed the whereabouts of the Mission, who have been diligently sought after by the Italians

ABYSSINIAN WAR DRUMS HAVE NIGHTLY BEEN BEATEN ON THE FRONTIER HILLS : The Emperor Haile Selassie stated in Khartoum last week that nightly his drums were sounding on the hills along the Ethiopian frontier, which must have a profound effect upon the loyal Abyssinians. Large numbers of chieftains came to the frontier to assure the Emperor of their allegiance, before he himself left for the interior .

THE crushing victory inflicted on the Italians in Libya by the British Army of the Nile makes the enemy's position in East Africa more hopeless than ever. Their last chance of being able to help their comrades elsewhere has gone, and their capitulation is only a matter of time.

Since Italy declared war on us, Italian East Africa has been cut off by our naval control over the Suez Canal zone. It has also been practically surrounded by British forces where its coast is not subject to British sea supremacy. This means that a large force of Italian and native troops, Fascist militia and Air Force, has been locked up where it could do nothing of importance unless Italy scored a striking victory in Egypt. The Italian High Command in Addis Ababa no doubt built up hopes on the superior tonnage of the Italian Fleet in the Mediterranean, and on the prospect of Graziani succeeding in his assault on Egypt and the Suez Canal. But these hopes have been shattered by the British naval successes and by our victories at Sidi Barrani, Bardia and Tobruk. Now the Italian forces in East Africa are little more than a beleaguered garrison.

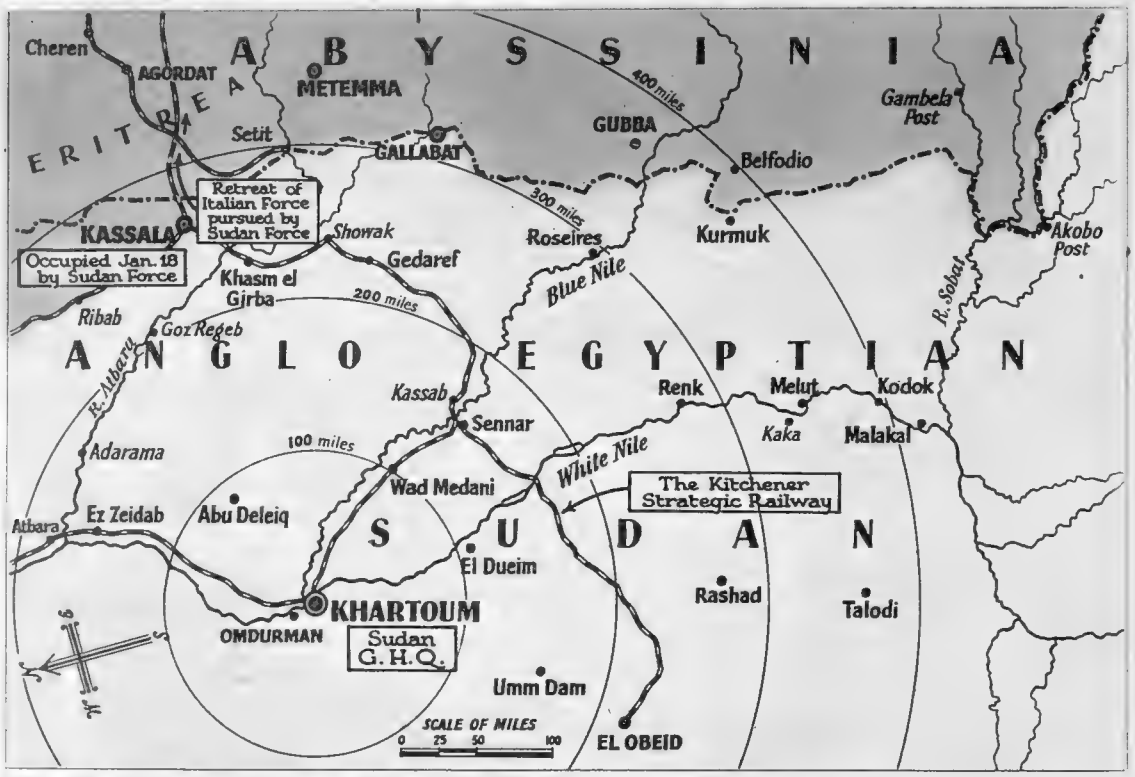
Mussolini probably had a twofold plan for East Africa. First, he had a defensive plan, now in force, which consisted of minor operations against Kenya, the Sudan and Aden, and included the occupation of British Somaliland. The object of this has been to forestall any British advances by certain routes, and at the same time to set up advanced bases for major operations in the event of the opportunity coming from Egypt. Secondly, he had a plan for a grand offensive from the advanced bases secured in his defensive plan. Here the object was to exploit an Italian success in Egypt, and to extend Italian domination to the whole area from Egypt to Kenya and from the Somalilands to the western Sudan. But for this second plan to be put into operation it was essential for Graziani to gain a decisive victory in Egypt, seize the Suez Canal, and control the railway and river systems of the Nile Valley. This done, Mussolini hoped to launch from Italian East Africa a general offensive against the Sudan, Kenya and Aden.

By advancing on Kassala the Italians hoped to forestall a British advance, and also to establish a base for a further Italian advance on Atbara when opportunity offered. The capture of Atbara would cut the railway and river communications between Egypt and Khartoum, and bring the Italians to the main stream of the Nile. The fighting round Gallabat and on the Kenya frontier near Moyale has been with a similar object in view, but the largest operation of this kind was in British Somaliland. There the enemy secured the small ports of Berbera and Zeila, and deprived us of an advanced base from which to attack the Moslem State of Harar, where we might expect the support of the native inhabitants. But the Italians also obtained a base from which to attack Aden if they were sufficiently successful in Egypt to threaten the Suez Canal. Their success in British Somaliland had also a moral effect on the Italians themselves, and influenced the natives of neighbouring territories. While both these benefits have been cancelled out by the British victories in Libya, Somaliland is now suffering from the shortage of supplies in Italian East Africa.

Deprived of any reinforcements in men or material, the Italians have to rely on supplies accumulated before the war and what the country can produce. While they probably have considerable stocks of war material in spite of repeated R.A.F. raids, oil shortage must be a serious menace. The administration of this huge region on modern lines depends on aviation and motor transport, both of

(*Continued on following page*)

OVER THE SUDAN-ABYSSINIAN FRONTIER ZONE: The R.A.F. have been keeping constant watch for Italian patrols and have harried them so greatly that a general retreat became evident. In this picture two British aircraft are shown on patrol



HOW THE IMMEDIATE ERITREAN PROBLEM PRESENTS ITSELF TO KHARTOUM: In the above map the central point is G.H.Q. at Khartoum, whence the great polyglot Sudan Army has been organised. In this map only a part of the great straggling 1,200-mile frontier is shown. It proved a most important sector last week when the Italians were forced to retreat from Kassala. *Below* is a column of the Sudan Defence Force on the march. This force has responded brilliantly to every call

The THREAT to ABYSSINIA

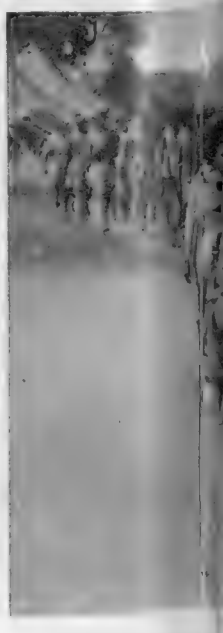
(*Continued from previous page*)

which eat up oil. They also need metals, rubber and other imported materials for maintenance and repairs. This is apart altogether from the needs of the armed forces. Also, the upkeep of tarmac roads means the use of oil by-products which cannot now be imported. As there are practically no oil resources in the country, the civil demands, added to those of mechanised troops and the Air Force, must be a heavy drain on the limited stocks accumulated before June of last year.

With the country's agricultural wealth and varied mineral, timber and other resources, much may have been done to make Italian East Africa self-supporting in food and other essential commodities. But this cannot produce the kind of raw materials urgently needed for war purposes, or even for maintaining their position in a newly-conquered territory. That many of the native races are hostile goes without saying, but there are others more likely to be friendly or disinterested.

Naturally, the Amharas are hostile. They have been deprived of their position as the ruling race of the Ethiopian Empire and are a warlike people. But they only compose one-third of the population ruled over by the Emperor Haile Selassie. The remaining two-thirds consist of a strange mass of subject races, differing greatly from the Amharas and in many cases from one another. These peoples are more likely to be friendly to the Italians, who have relieved them from Amharic oppression. Yet there is no doubt that British victories and declining Italian moral will make all these races look to the winning side. Meanwhile, every effort is being made by the Emperor and others to stir up as much opposition as possible by means of guerrilla warfare, sabotage and other harassing measures. How far this movement has gone is impossible to say.

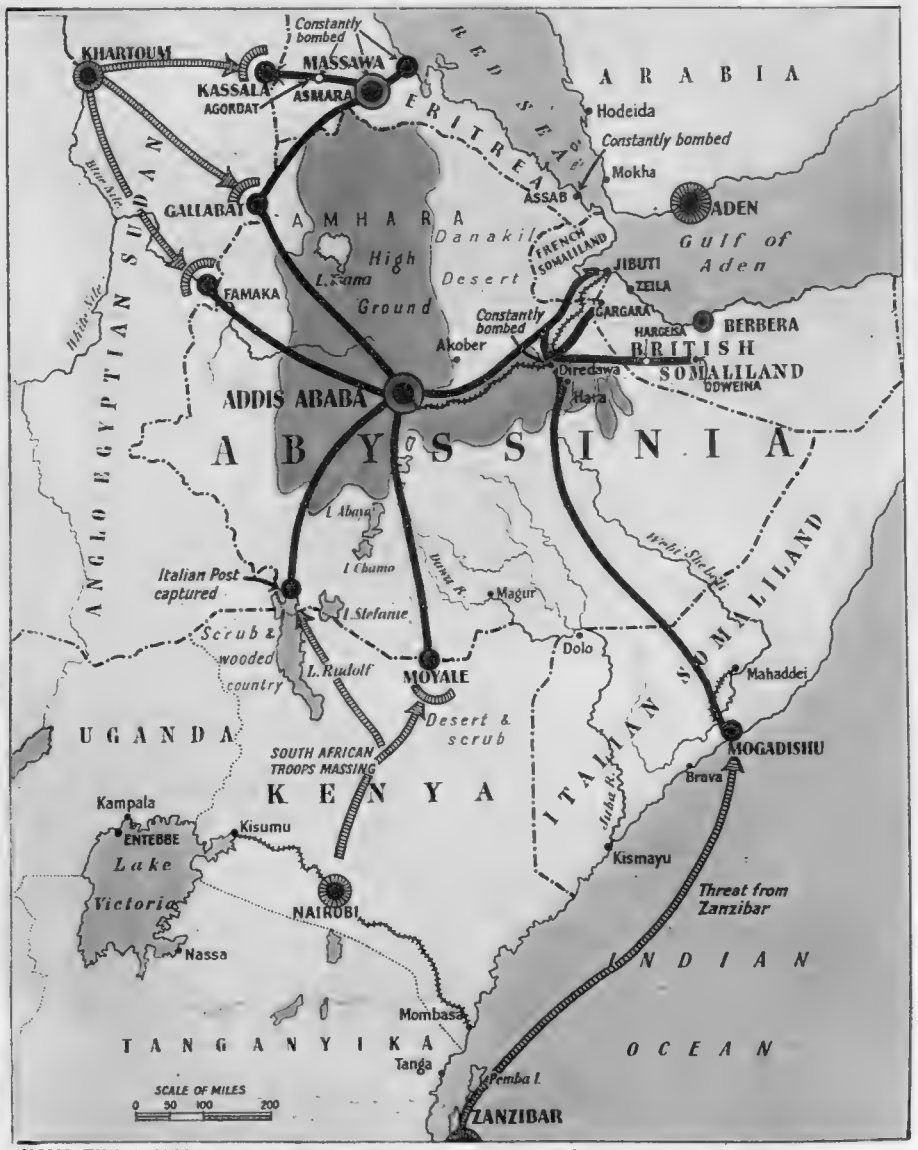
The important point, however, is that the Italian defeat in Libya has deprived the minor Italian successes in East Africa of all their value, and has left the Italian forces there completely in the air. With ever-diminishing material and supplies, with incessant air attacks on his troops, aerodromes, communications



Drawings by Roland Davies

THE R.A.F. FLYING OVER THE NORTH KENYA FRONTIER PLAINS: Continuous bombing of Italian patrols, particularly between Lake Rudolf and El Wak, has also been carried out by the R.A.F. in the North Kenya area

A CASEMATE OF KASSALA FORT: The native town of Kassala lies at the foot of the great jebel which towers above the surrounding plains. Just outside is the Fort, a small fortified frontier post. During past months the Italians have extended gun emplacements and barbed-wire defences. *Below* are seen a number of Eritrean, Galla and Abyssinian conscripts captured during a recent foray into the Kassala and Acroma hinterland



HOW THE ITALIAN G.H.Q. MUST VIEW THE SITUATION: The condition of affairs in Italian Ethiopia cannot have presented itself satisfactorily to the Italian G.H.Q. in Addis Ababa. The general drawing-in of all the Italian outposts was disheartening and likely to encourage the disaffection which has been rife in several areas. There were no supplies reaching her from Libya or Italy. Only an occasional plane arriving with a small load of medicine has penetrated the blockade

and supply depots, the enemy has to face the British blockade and the cruel onslaughts of an outraged native race. With his oil supplies running low, his military machine must become more and more immobile and his administrative services less effective. The news from Europe must convince him that there is no longer any hope of Fascist dreams being realised, and that the longer he holds out, the worse his position will be. The thought of German troops in Italy may be the finishing touch to his dismay.

(Continued on following page)

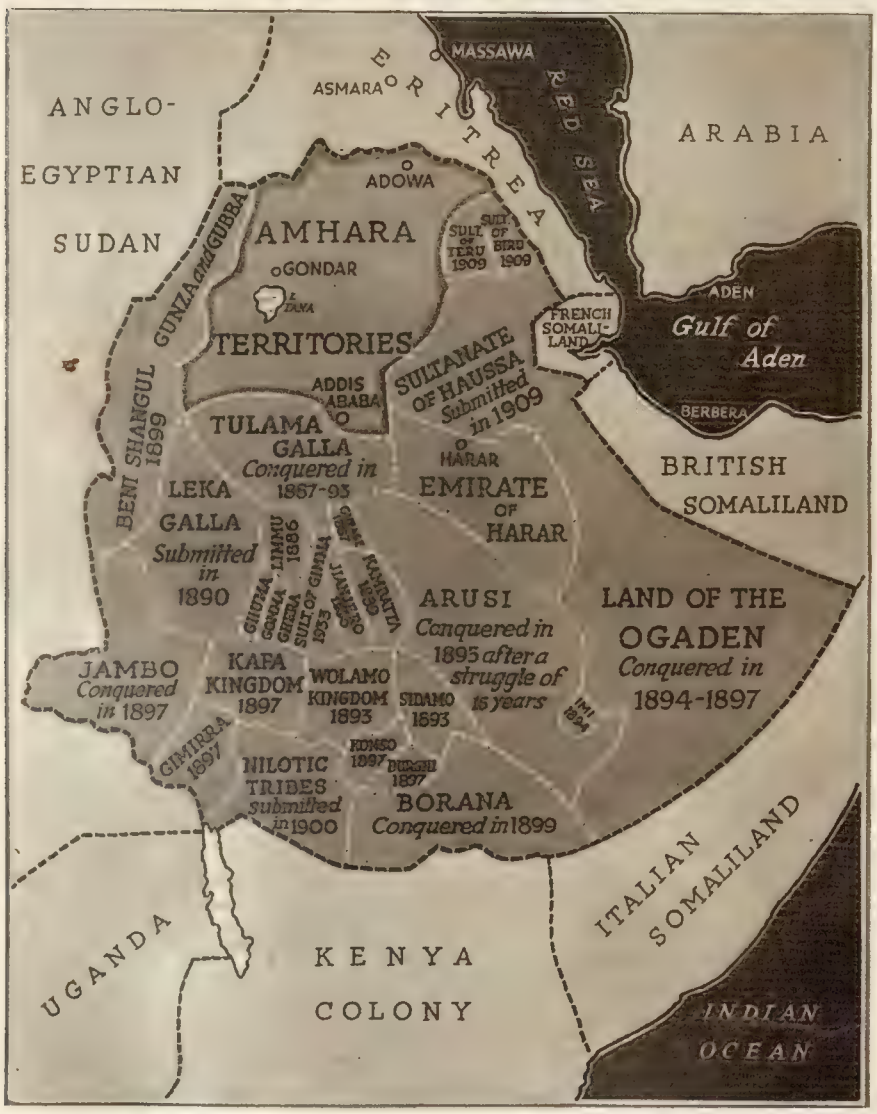
WITH THE SOUTH AFRICAN FORCES IN THE KENYA WAR ZONE : Here are some of the men of the South African Forces resting and reading their mail under the scanty shade provided by thorn-bush and grass

THE THREAT TO ABYSSINIA

(Continued from preceding page)

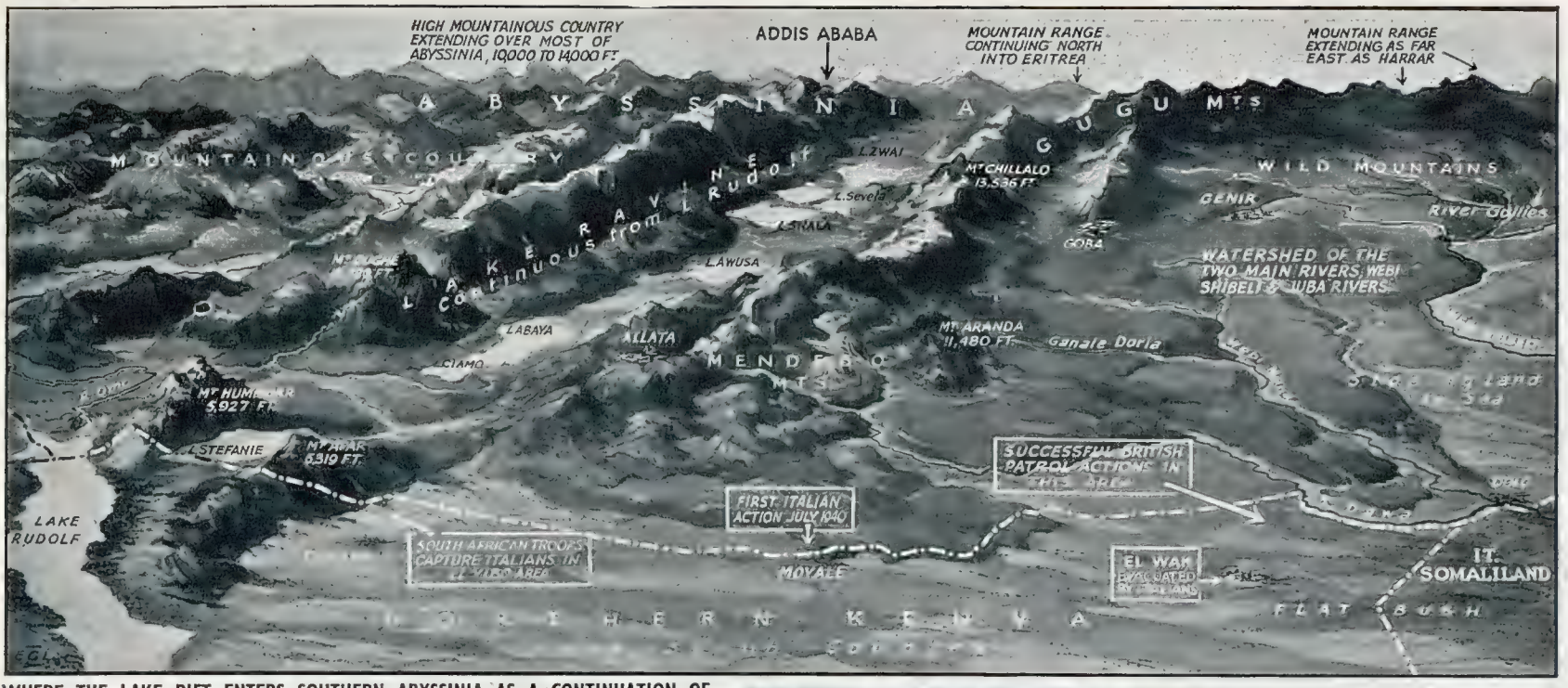
Yet, if the Italians in Europe become subordinate to Germany, the Duke of Aosta may prefer to give up in Italian East Africa, and with our help form the beginnings of a new Italy on African soil.

The country on the Italian side of the northern frontier of Kenya is mainly flat and open, although there are forests south of the foothills of the Abyssinian mountains. It is not till the neighbourhood of the lakes is reached that it begins to become mountainous. All this territory is suitable for mechanised forces operating from Kenya, but less so for those based on the highlands of Abyssinia, owing to the mountains through which they have to pass. There are plenty of splendid sites for aerodromes, but petrol supply must be difficult for the Italians operating from the mountains through a hostile country. The Italian aerodrome at Irgalem is like an English meadow just before the time for cutting the hay. Green grass stretches for miles in all directions, with thick forests showing against the skyline. In one direction the grassland is so perfectly level that scores of polo grounds could be made here merely by cutting the grass. The



THE MEDLEY OF KINGDOMS AND TRIBES WHICH BECAME THE ABYSSINIA OF THE TWENTIETH CENTURY : The above map shows the areas occupied by the various peoples and tribes making the Abyssinia of the present century. In the last decade of the nineteenth century that forceful warrior and leader, the Emperor Menelik, succeeded in welding the disunited and scattered peoples of this extraordinary upland territory into one kingdom or empire. The most important territories in the chronological order of their acquisition are Gemma, Harar, Lake Jalla, Wolamo, Galla Tulama, Arusi, Ogaden, Kafa, and Borana

THE MAIN LINE OF RETREAT FOR CIVILIANS AND NON-COMBATANTS GENERALLY: A scene at the Addis Ababa terminus of the Djibouti railway by which, it was suggested, women and children might be removed to French Somaliland. *Below*—Abyssinian tribesmen, escaped from Italian dominance, being trained in Kenya for service against their enemies



WHERE THE LAKE RIFT ENTERS SOUTHERN ABYSSINIA AS A CONTINUATION OF THE LAKE RUDOLF AREA : The Kenya-South Abyssinia war zone is flanked on the west by a very remarkable geological feature—a series of lakes occupying a prolonged rift. Lake Rudolf flanks the northern Province of Kenya, its northern end entering Abyssinian territory. Curving round to the eastward is a string of some seven lakes, running into the heart of Southern Abyssinia. In the foreground is the actual border territory which has been the scene of increasing patrol activities

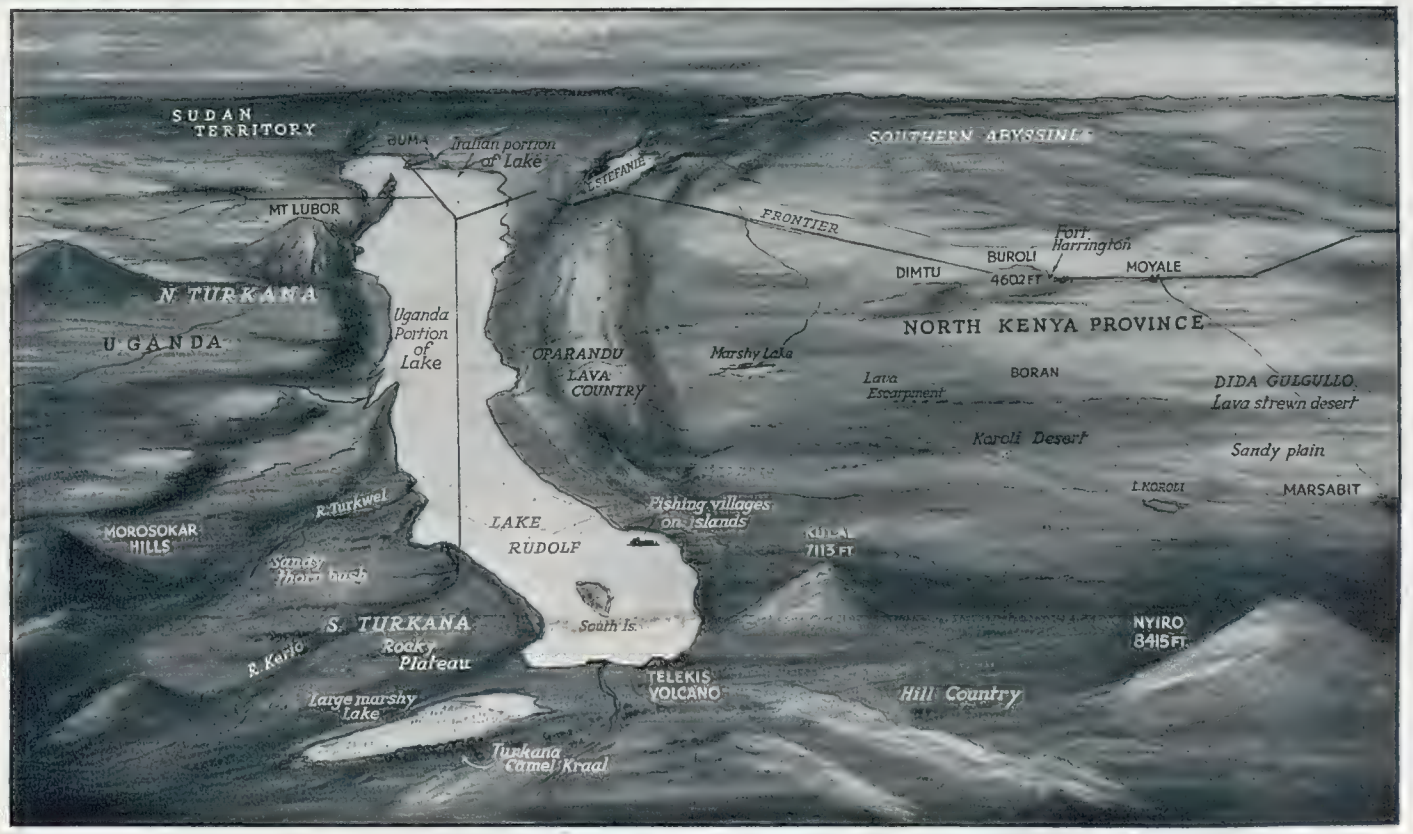
LUGGAGE-CARRIERS OF THE KENYA AREA : The native women carry out a great deal of the hard work of life ; no gallant swains offer to carry these domestic loads, which add to the weight of the personal adornments worn by the women

IN THE TURKANA AREA BORDERING LAKE RUDOLF : There are two sections of this Turkana country—both lie on the west side of Lake Rudolf, as indicated on the bird's-eye view given below. As the country has been guarded in the manner shown, it would appear that the Italians were carrying out operations on the lake before being forced eastwards by the Kenya forces

conditions at the Iavello aerodrome are much the same. The only drawback is the mud in the rainy season.

On the east side of the Kenya frontier the country in Italian Somaliland is also flat, but not so open, owing to bush near the Juba River, which takes a curve and runs almost parallel to both the northern and eastern frontiers of Kenya. This broad, muddy-looking stream twists and turns so much that, at places, it almost crosses itself. El Wak, recently evacuated by the Italians, is about 100 miles from the important centres of Dolo and Lugh Ferrandi, both on the Juba River. The capture of these points would threaten Mogadishu, the capital of Italian Somaliland and an important source of supply, as well as the port of Khisimayo, near the mouth of the Juba.

E. W. Polson Newman



THE LAKE RUDOLF FLANK OF THE FIGHTING AREA IN NORTH KENYA

Lake Rudolf forms a junction for the three territories of the Sudan, Abyssinia and Kenya. The lake is further divided politically into two by a vertical imaginary line, with Uganda on the left and Kenya on the right. They all impinge on the northern head of the lake, which lies in a volcanic area. There is a volcano at the southern end and away to the west ; while on the east are large tracts of lava-strewn country stretching away towards the line Moyale-Marsabit. Hills rise abruptly from the lower ground, often thorn or grass covered in the area here depicted. The lakes are often marshy, with only one end showing clear water, the water-level varying greatly according to season. The grass area of El Wak and Wajir lies farther to the east

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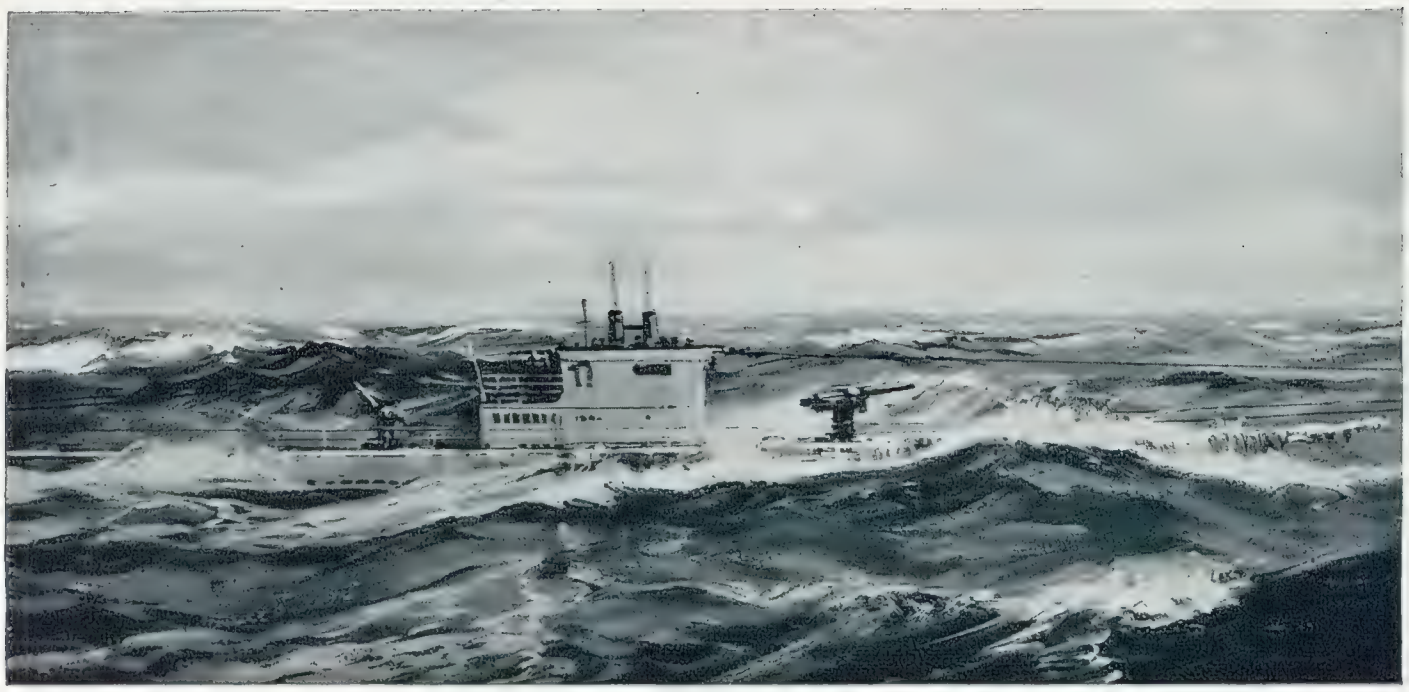


" *There was a constant queue in the Control Room, waiting for a chance to go on the bridge for fresh air, but the Captain's orders must be obeyed, and only two men at a time were allowed to share the doubtful pleasures of the navigating party. . . .*"

U-BOAT PATROL

A Story of the Under-Water Navy

By GILBERT HACKFORTH-JONES, COMMANDER, R.N.

(Drawings by Montague Dawson)

IT was the prolonged bad weather that caused the loss of *UZ*43. This, of course, does not detract from the efficiency with which the Coastal Command aircraft despatched her. There was another contributory factor—the red wine of France.

On their arrival at a French seaport the officers and men of *UZ*43 had experienced for the first time in their short lives a sense of freedom. They were away from the spartan discipline of the training schools and the watchful eye of the Gestapo, and there was food to be had—butter, eggs and lots of wine. They had indulged *ad libitum*, and when they got to sea they had to pay for this indulgence.

*UZ*43 sailed a few days before Christmas under orders to carry out an offensive patrol against enemy merchant shipping. There was nothing encouraging in the outlook, thought the captain as he noted the steady falling of the barometer to new low levels and the general murkiness of the atmosphere. As soon as they had left the sheltered waters of the harbour they began to find it. Four hundred miles to windward was their destination, and this meant forty hours of plugging into a head sea.

*UZ*43 was not a bad sea boat, but she was only of six hundred tons displacement, which is small enough in an Atlantic gale. Green seas swept down on her low upper deck casing, breaking on the forward gun and sending up showers of heavy spray which mercilessly thrashed the men on the submarine's tiny bridge. Down below in the submarine the motion was terrific, especially on the forward mess decks. The red wine of France was wreaking a terrible revenge on the callow stomachs of the Nazi seamen. There was a constant queue in the control room waiting for a chance to go on the bridge for fresh air, but the captain's orders must be obeyed, and only two men at a time were allowed to share the doubtful pleasures of the navigating party.

The atmosphere in the submarine as a result of all this sea-sickness was foul. The captain's nose wrinkled distastefully when he came below for a meal, only to be served with a piece of cold sausage by a retching steward. It was a bad start, he told himself. As if there were not enough troubles without it.

It took forty-eight hours to reach the patrol area allotted and the weather became worse as they entered the path of the cyclonic depression sweeping north-eastward towards the British Isles.

At dawn on the third day out the captain eased his engines and altered course to the northward to patrol his position. The sea was now on the beam, and though the conditions on the U-boat's bridge were much better, the movement of the vessel changed from violent pitching to heavy and incessant rolling. The waves were of such a size that visibility from the bridge was limited to such periods as when the U-boat was raised on their crests; down in the troughs they could see nothing but great mountain ranges of foam-flecked monsters sweeping past in a remorseless, unending procession.

It was the captain who sighted the first ship they had seen since leaving harbour. A great two-funnelled liner moving at speed and coming towards the U-boat. No doubt about her nationality. She must be British—no other nation's ships dared take the seas. If there were not enough troubles weather it was a different matter.

" *It was the Captain who sighted the first ship they had seen since leaving the harbour. A great two-funnelled liner moving at speed and coming towards the U-boat. No doubt about her nationality. She must be British—no other nation's ships dared take the seas. . . .*"

"Dive," ordered the captain. The look-outs on the bridge scuttled below and he followed quickly, treading on their fingers so that they dropped the last 6 ft. into the Control Room. The captain clipped the hatch and followed them. Now began the battle to get the U-boat down to periscope depth. It seemed to take ages, but eventually she was running along at about 25 ft., and the captain concentrated on his periscope, trying to get a clear view of the target. "Bring all tubes to the ready," he ordered. There might be a chance to fire. Looking through a periscope in this weather was a nightmare. He occasionally saw her masts and the tops of her funnels, but nothing more. He steadied the U-boat on to its firing course. He knew it was waste of torpedoes, but he decided to fire them as a forlorn hope. He had his reasons for this decision. His senior officer would accept no excuses if he returned to harbour without having expended his ammunition. And so he commented on the target and raised his crew to a pitch of excitement in their belief that they were going to sink a valuable prize. "Stand by," he ordered, and then "Fire!" There were a series of thuds as the torpedoes left the tubes, followed by a period of suspense as they waited for the shattering explosions that would tell them that the missiles had found their mark.

Presently they knew that they had missed and gloom descended. The captain waited awhile and then ordered "Surface."

When he emerged from the conning-tower hatch on to the dripping bridge the great liner was just a blur on the dark horizon, hurrying southward unscathed. Six torpedoes wasted and nothing to show for it.

That night the wind veered to the north, the temperature dropped sharply, and the sea began to abate. There was still a heavy swell but the change of wind would eventually make itself felt. Then came a wireless signal from Headquarters. "Large enemy convoy to the northward. Proceed to intercept." The captain swore. Another burst of speed into a head sea and a different sea this time. The spray that flogged the bridge was nearly solid before it landed and froze as it touched the metal-work of the U-boat's superstructure. In the dim morning light the captain lifted his salt-crusted face and looked at his periscopes with a sinking heart. They were crusted with ice. A blow-lamp was brought up, but the spray extinguished it. They were hacking with their knives when the first sign of the convoy was sighted. And then the cry "Aircraft"—and they were forced to dive.

The captain took the U-boat to 100 ft. to melt the ice, and when he again rose to periscope depth he peered anxiously to find out if it had gone. Yes, he could see something—some smoke, some black sticks—masts and a dark blur or two—ships. Then the vision faded—ice was forming again. With a curse he ordered an increase of depth and curbed his impatience, waiting for the thaw. Up again—more ships—nearer this time—then black out—ice again.

After ten minutes he came up again, the convoy was clearly visible ahead. The tubes which had been reloaded were brought to the ready. There were escorting warships about; he saw two; they were coming his way. Then the periscope fogged again. Down again at 100 ft. the captain bit his lip with impatience and tried to make up his mind to abandon the attack and hope for a better target later on, but although this would have been wise, he was afraid of what might be said both by his crew and also by the authorities when he returned. They wouldn't understand his explanations. He decided to fire a "browning" shot and chance a lucky hit; after all, the convoy made a big target.

He conned his command into a firing course and then whilst still at 100 ft. he ordered "Fire!" Away sped the last of his torpedoes. The seconds ticked as all ears were strained for those tell-tale explosions. Suddenly they came, but from the wrong direction. Three shattering convulsions which lifted the U-boat, banged her down, jostled her and shook her mechanism until she rattled like a bag of dried peas. Depth-charges! They never knew where their torpedoes went, and cared less. They were being hunted, and their first and only preoccupation must be to escape.

It was gathering dusk when *UZ43* surfaced. For hours they had been the quarry in a deadly game of hide and seek from which they emerged physically scathless, but morally shaken. It was because of this that the captain decided to surface before it was properly dark—a rash act unworthy of his usual phlegm.

Fortune, however, appeared to smile on him, for no sooner had he reached the bridge and ascertained that no enemy warship or plane was in sight than he saw something that gladdened his heart. A lone freighter proceeding slowly in the wake of the convoy long since past. She was obviously a lame duck left behind, sacrificed for the greater good of the majority. A sitting target, unarmed save for a pip-squeak gun on her poop.

Here was a chance too good to be missed. *UZ43* had expended all her torpedoes, but she still had her gun. The captain looked at the tumbling sea and weighed up the possibilities of fighting the gun on that unprotected upper deck. It must be given to his credit that he decided in favour of making an effort.

At his order the gun's crew came tumbling up—action at last after that infernal waiting for the next depth-charge. They scrambled and slithered down from the bridge to the gun platform forward of it and managed to load and fire the gun. As sea after sea swept along the submarine's casing they were frequently up to their waists in water and clinging on to anything for dear life. Their shooting was appalling to start with, but when the captain altered course to put the sea on the quarter, they began to improve and presently shots began to fall perilously near the freighter. She in the meanwhile had altered course away, but her speed was so slow that she could do nothing to get away and her gun could not be brought to bear.

It was at this moment that the Coastal Command took a hand. The great flying-boat came out of low cloud and was on them before she was sighted. Two bombs straddled the U-boat. "Cease firing—everyone down," yelled the captain. The crew needed no spur. It was a question of getting under before the flying-boat had time to turn and come in with a second attack. It was a close thing, but the flying-boat won. A bomb burst squarely on the conning-tower hatch just after the captain had secured it. The U-boat lay for a moment on the surface with smoke pouring out of the gash in her top-sides. Then her bows rose to salute her conqueror and disappeared in a flurry of foam into the arms of the ocean that had betrayed her.

"The spray that flogged the bridge was nearly solid before it landed and froze as it touched the metal-work of the U-boat's superstructure. . . . The Captain took the U-boat to 100 ft. to melt the ice, and when he rose again to periscope depth he peered anxiously. . . . Yes, he could see something—some smoke, some black sticks, masts and a dark blur or two, ships. Then the vision faded—ice was forming again. . . ."

"They scrambled and slithered down from the bridge to the gun platform forward of it and managed to load and fire the gun. As sea after sea swept along the submarine's casing they were frequently up to their waists in water and clinging on to anything for dear life. . . ."

THE GERMAN BOMBER —AND YOU

Sound, Speed, and Time—the Three Principal Factors Involved

In the series of diagrams given here, the artist addresses himself to the reader who has been subjected to bombing attacks by German raiders, both by day and night. It may be said at once that the light-tinted drawings relate to optical effects in daytime raids, and the black ones to sound effects during night raids. Every reader who has endured these attentions from the air will have heard the drone of the bomber, apparently hovering dead over his house, and will have heard the horrid sound of the falling bomb and the final crunch as the bomb strikes a building or the naked earth. The more mechanically-minded among our readers will have endeavoured, when circumstances have permitted, to work out roughly for himself (and for the benefit of his family circle), from sound and time effects, when and where a near-by bomb is falling. It is to this type of reader that the artist addresses himself. This series of sixteen diagrams deals with the curving flight of bombs, the sounds which they create during their fall, the speed of their fall in relation to the speed of sound, and how these matters affect the civilian on the ground. Four of the diagrams also show how faulty enemy workmanship modifies the main factors controlling the falling bomb.

No. 1 has been drawn as an introductory note to show that, in order to hit the house with the white roof in which Citizen X is taking shelter, the whole structure of the bomber must be aiming directly at the building. There can be no launching of a bomb from a side angle, as in the case of the torpedo-tubes of a destroyer. The bomber, the bomb and the roof are all in one vertical plane. If the air is not quite still, there would be a slight angle from the point of discharge, the bomber having to make a slight correction for movement of wind before releasing the bomb. The artist also makes the point that a bomber often turns away at once after releasing a bomb. Therefore, if you see this movement, it may very well indicate that a bomb has been released.

No. 2.—The track of the falling bomb in No. 1 diagram is shown vertically as the bomber is coming directly towards the spectator. In this diagram, the course of the same bomb is shown sideways, as if the spectator is in the happy position of being some distance away to the right. He is far enough away to see the whole fall of the bomb, which has been released from an enemy machine at a height of 20,000 ft. when travelling at a speed of 250 miles per hour. It is supposed to be a still summer day with no appreciable wind. The bomb has been aimed at Citizen X's house, but has been released at a point two miles away, as measured on the ground. If the spectator's eyesight was very sharp, he could see the bomb falling in a curved path and could note the bomb at four different stages in relation to the bomber. He would notice that as the enemy plane progressed the bomb would lag behind, though all the time advancing, until it finally struck Citizen X's house 47 seconds after it had been released. The bomb did *not* hit the ground vertically under the plane: its point of impact was 7,000 ft. behind that popularly supposed danger-spot.

No. 3.—This diagram and the two following show in detail three stages more simply indicated in No. 2 diagram. No. 3 shows the movement of release; the bomber is aiming at Citizen X's house at an angle of 61 deg.

No. 4 shows the bomber directly overhead; at this moment Citizen X cannot be hit. The bomb is coming towards the house, but cannot yet reach it. **No. 5** shows the moment of impact of the shell on the house. The enemy plane is at an angle of 70 deg. in relation to the ground-level. He is passing away to the right, surrounded by A.-A. fire, which, it is to be hoped—and it increasingly does—will catch him before he does further harm.

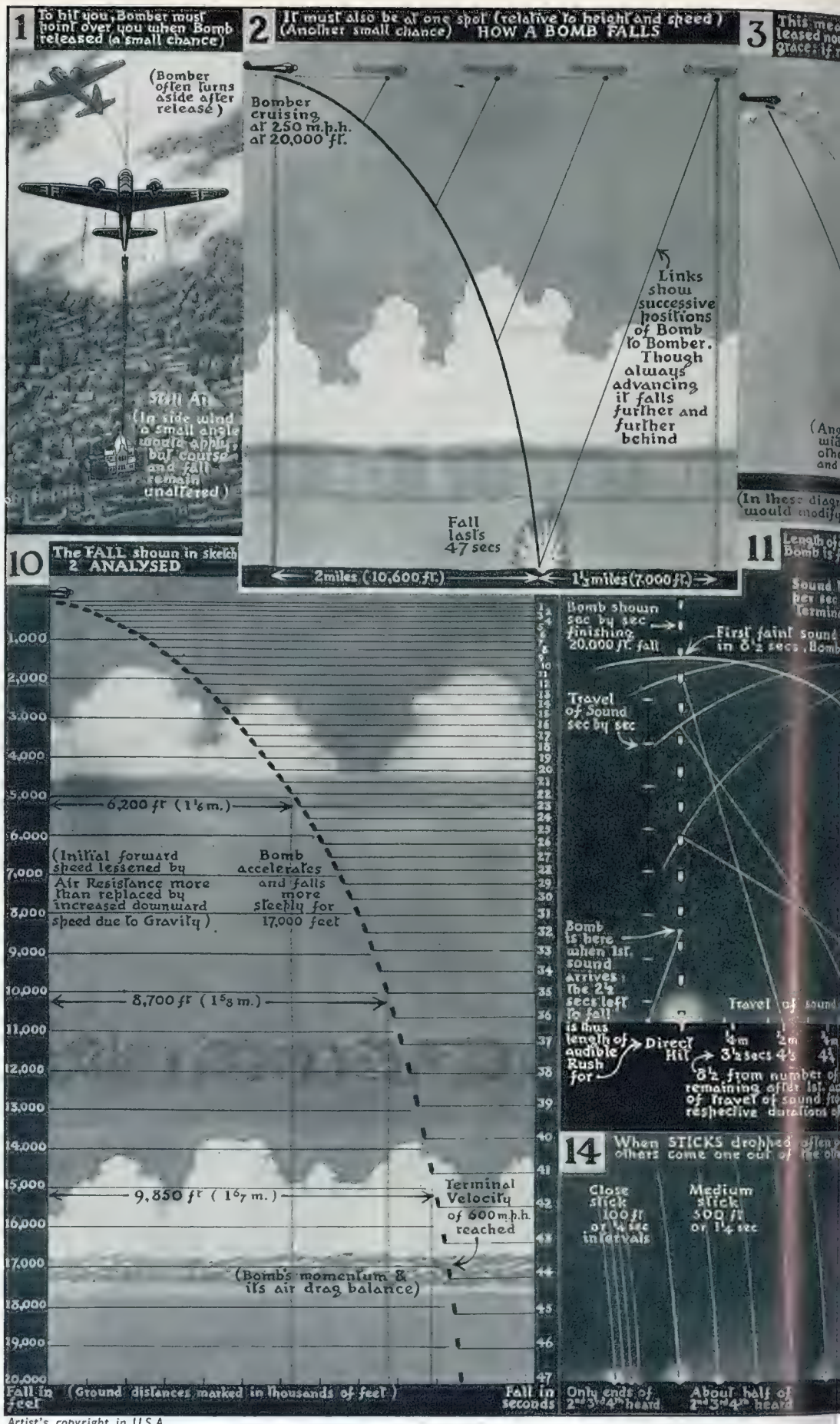
Nos. 6 and 7 show a comparison between German and British bombs. The German is cylindrical in its centre part, with a sudden, conical end-piece to which large fins are attached. These are apt to get bent, and cause wobbling and noise. The British bomb is beautifully streamlined, its fins are protected, and its aim truer.

No. 8 draws attention to the better falling speed of the British bomb and its shorter warning noise.

No. 9 shows how some sticks of German bombs actually fall. The bombs should fall at regular intervals, as indicated by the plain white discs on the right. What actually happens is often like the irregular row of hits and craters seen on the left. The adjacent figures show the varying distances in yards separating the actual places of impact. The irregular spacing of the bombs is caused by faulty fins as mentioned in 6 and 7.

No. 10.—This diagram, which is not nearly as complicated as it looks, shows the reason why the falling bomb takes the parabolic course shown in No. 2. The diagram is an elaboration of this curve. The bomb is released at 20,000 ft. and begins to fall. It moves forward and downwards. Its downward movement is slow at first, and the number of feet it falls in a second of time is small compared with the distance traversed as it approaches the earth. The gradual increase in feet per second is shown by the parallel lines on the right-hand side of the diagram coming from the tips of the little bombs which form the continuous curve. It will be noticed that height in feet is shown as a vertical column on the left, and the fall in seconds as a column on the right. The parallel spaces widen as the bomb approaches the earth. The modifying factors which cause the downward curve to be parabolic are shown within the bomb's track to the left. At a point where the bomb has fallen 6,200 ft. the curve begins to lose its first simple form. The initial forward speed is lessened by air resistance, but that is more than replaced by the increased downward speed owing to the gravity pull. The bomb is observed to begin to fall more steeply for the remaining 15,000 ft. separating it from the earth's surface. At three points the distance of the edge of the parabolic curve from the vertical is indicated: 6,200 ft., 8,700 ft. and 9,350 ft. when the bomb is passing through a gap in the belt of cumulus cloud. It is in this last-named zone that the bomb's momentum and the drag of the air balance one another and the terminal velocity of 600 miles an hour is reached. The bomb hits the ground 10,600 ft. in front of the point at which it was released.

No. 11 is the most useful diagram of the series and worth special study, for it tells you the meaning, in terms of distance, of the audible rushes of sound you hear when a bomb is dropped near you. A special scale is given which tells you how far away a bomb will fall as indicated by the length of time you hear one of these rushes of sound. Here again we have Citizen X's house, on which a direct hit has occurred. Above the house is a column of bombs shown in their gradually widening positions as they finish the 20,000-ft. fall. At the left-hand side are little dashes showing the travel of the bomb's sound from the first point at which it becomes audible. As sound travels faster than the falling bomb, there are 2½ seconds of sound before the bomb arrives in the case of a direct hit. To the right of Citizen X's house is a line of distance marks in ¼ miles and below them a scale of



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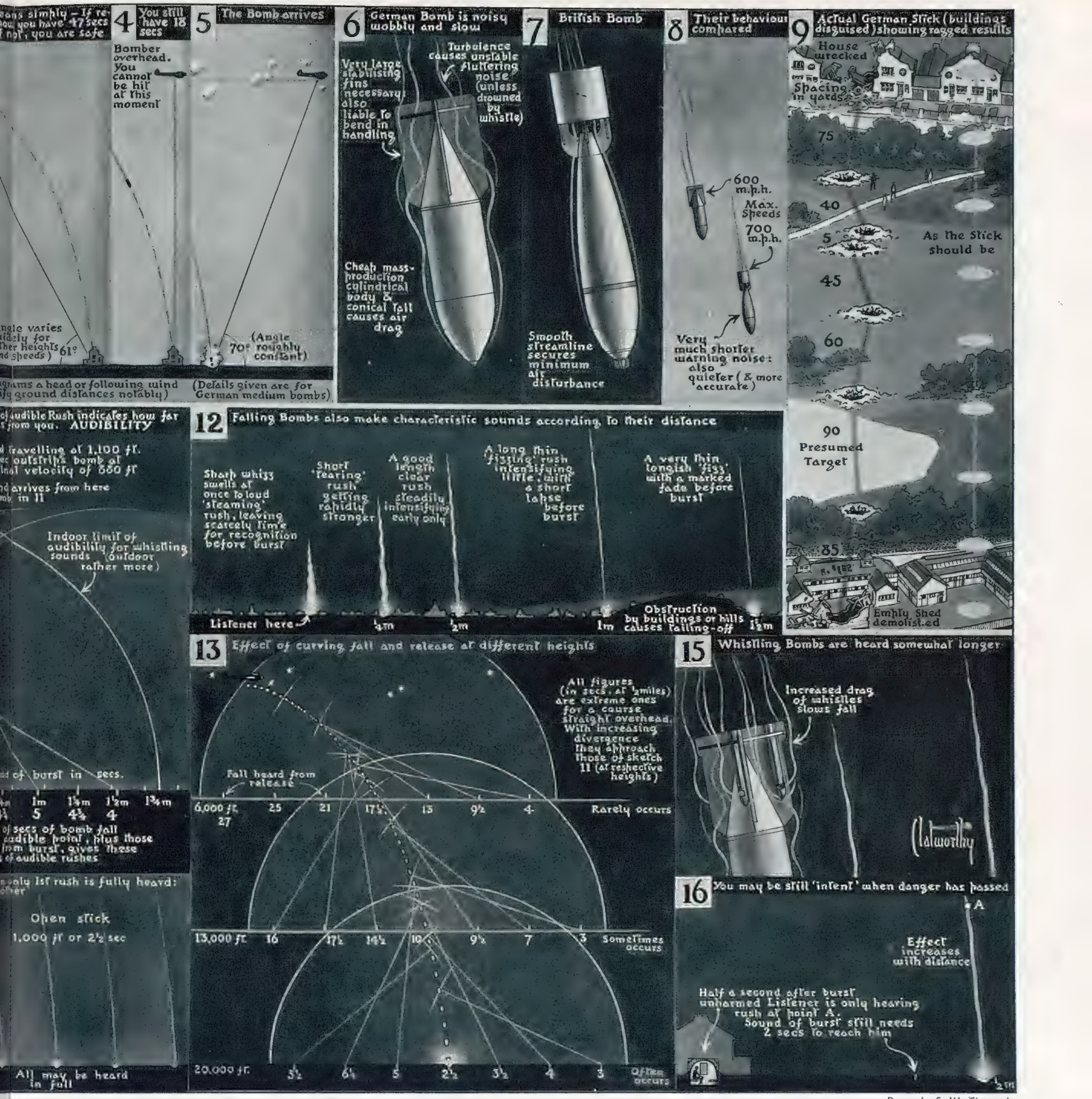
THE DROPPING FLIGHT OF GERMAN BOMBS AND THE SOUNDS THEY MAKE: A series of diagr passage is h



Drawn by S. W. Clatworthy

...iagrams which show, among other things, how one can determine the distance at which bombs are falling, by counting the seconds during which the rushing sound of their ...is heard. (*Full details of each diagram are given in the accompanying text*)

seconds. Thus, if one hears the tearing rush of a bomb and it endures for five seconds, the bomb will fall a mile away. The thin lines are radii of hemisphere of audibility. They spring from given points on the ¼-mile line, and the outer edge of the hemisphere is indicated by an equally thin curving line. Whistling sounds outside these hemispheres are too far away to be heard. The hemisphere indicated by a thicker line, which has a radius from Citizen X's house, indicates the indoor limit for whistling sounds. Out of doors you can, of course, hear for a greater distance.

No. 12 shows how one can determine the distance of a bomb by the varying sounds which one hears. The first one concerns a direct hit—anyone in Citizen X's house would have heard a loud, "steaming" rush—so our artist describes it—before the bursting of the bomb. But if you hear a short, tearing rush, getting rapidly stronger, the bomb will fall a quarter of a mile away from you. If you hear a good length of the clear rushing sound with a steady increase at the beginning, the bomb will fall half a mile away. A mile is indicated by a long, "thin fizzing" rush—and the same thin fizzing sound, with a marked fade-out, before the bursting of the bomb indicates a distance of a mile and a half.

No. 13.—This diagram, which is divided into three parts, appears, at first sight, complicated, but if taken point by point its message becomes clear. It is included in order to show that the table of sound in relation to distance given in diagram No. 11 can be very materially affected by the varying height of the plane and the curvature of the fall. A true horizon is given at the bottom of the diagram, and the bomb is shown, once again, registering a direct hit on Citizen X's house. The household, as before, only have the 2½ seconds' warning, but people at a distance from the house have varied lengths of warning, according to whether the bomber is travelling at 6,000 ft. or 13,000 ft. The figures given below the two false horizons indicate the direction of sound, as heard by the listener, in seconds. Take, as an example, the point marked 9½ seconds. A thin radial line indicates the hemisphere of audibility at this point, the length of time of the warning and the approximate position of the bomb. At 6,000 ft. it is possible for a bomb to be released behind your head, curving right down over you, be audible throughout the whole drop, and yet strike a considerable distance away.

No. 14.—This diagram draws attention to the kind of sound when a stick of bombs is released. Often the rush of No. 1 is distinctly heard—the sounds of the others are apt to merge.

No. 15 records the fact that whistling bombs are heard for a somewhat longer period and that the increased drag of the whistle slows down the fall.

No. 16.—This illustration records an example of the vagaries of sound owing to its comparatively slow travel. It is instinctive to identify a flash and a bang which occur simultaneously, but unless these occur right beside you there can be no connection.

Drawing by Montague Dawson

BOMBERS ACROSS THE WIDE, LONELY ATLANTIC—An artist's impression of the scene in mid-Atlantic as the ferry pilots bring their war-machines across: It is only twenty-two years ago since the Atlantic was first crossed in an aeroplane by Hawker and Mackenzie Grieve; it is only a few years since that cross-Atlantic airmen were heroes to the whole world. To-day, "ferry pilots" are bringing over our big bombers in one hop from the New World as part of a daily routine!

FLYING THE BOMBERS ACROSS THE ATLANTIC

The Air Ferry Service which is now Bringing a Continuous Stream of Big Aircraft to Britain

TWENTY-TWO years ago the Atlantic was flown for the first time non-stop by Alcock and Brown from Newfoundland to Ireland. They flew a Vickers Vimy, a modified bomber designed and built to bomb Germany in the last war.

To-day a steady stream of American-built bombers is crossing the Atlantic from almost the exact spot from which Alcock and Brown took off. Those bombers to-day are coming to join squadrons which go out to bomb Germany in the new and far greater air war.

A few years ago the news that aeroplanes were being flown across the Atlantic in swift succession would have filled every headline. To-day, in the urgencies of war, the news is taken as a matter of course, despite the fact that the ferry service was inaugurated in winter and the first flights were made without incident in some of the most difficult flying months of the year.

When American help for Great Britain really began to get into its stride late last year, some means had to be found of speeding the delivery of new aeroplanes. The supply of ships was very limited, especially those with enough deck-space to take a number of aeroplanes. Most of the bigger types were too big to be stowed in the holds without complete dismantling. So, to save time in transit and to save time in the dissembly and reassembly of the aeroplanes, the decision was taken to fly across as many of the aeroplanes as could be expected to do the flight of 2,500 miles in reasonable safety.

THE NORTH AND THE SOUTH ATLANTIC ROUTES: The northern route from Newfoundland to Foynes, in Ireland, is that followed in pre-war days by the big Imperial Airways flying-boats. The southern route is by way of the Azores and Bermuda to New York: this is the route followed by the Clipper to Europe, the terminal point on this side being Lisbon

CAPTAIN PAT EVES, one of the ferry pilots, who has made an epic flight across the Atlantic. He is reported to have breakfasted on the other side, and to have handed in his aircraft on this side before teatime! These daily feats are making the flights of the pre-war cross-Atlantic pilots look very small accomplishments!

The modern aeroplane is an altogether different proposition from the old bomber in which Alcock and Brown crossed the Atlantic in 1919, or even from the little monoplane in which Lindbergh followed in their trail in 1927. In those early flights the odds were heavily against the adventurous pilots. To-day they have been calculated as 100 to 1 in favour of success. In any case, they are no heavier than those of everyday service in the Coastal and Bomber Commands, whose normal duties take their crews for hours out over the open sea in the face of enemy attack.

When the Ministry of Aircraft Production decided to put into force direct ferry flights of aeroplanes across the Atlantic, Mr. George Woods Humphery, late chief of Imperial Airways, was put in charge of the American end of the scheme. His unrivalled knowledge of the organisation of long-distance flying has been immensely useful in preparing the way for success.

The pilots recruited for the ferry service number among them many well-known names on the Empire air routes in days of peace. American volunteer pilots are usually carried as well, and will later take over as captains of aeroplanes being brought across. A radio operator, often a Canadian, forms a third member of the crew of each machine.

The journey of an average Lockheed Hudson bomber on its way to join its squadron takes it half across the world, finishing with the Atlantic crossing. The Hudsons are flown across the American continent from Los Angeles and on into Canada. There they have a final inspection and are taken over by their Atlantic crew, which flies the machine up to Newfoundland and finally sets it down at Hatties Camp, the great aerodrome built for the operation of commercial landplane services between London and New York.

At this time of year Hatties Camp is deep in snow, but an elaborate system of snow-ploughs and snow-rollers keeps the runway firm and hard for the take-off for Great Britain. The aeroplanes are heavily loaded with fuel, but they take off with much less run than the old pioneers needed with half the load.

The aeroplanes sometimes fly high, to take advantage of good weather, to avoid ice and to avoid prowling enemy machines off the Irish coast. A normal journey is made in twelve or thirteen hours, although the record is some hours less than this, and as new and faster aeroplanes come into service the time is certain to be reduced still further.

On landing, the new aeroplanes have a rigorous inspection, as they do after normal service flights, and they are then sent to be fitted with full R.A.F. equipment and armament and to have any extra fuel tanks removed.

The ferry pilots who bring across these aeroplanes take the flight as all in the day's work. In fact, in the few months that the service has been operating, several of them have made a number of crossings. Naturally the chief art in Atlantic flying to-day is that of exact navigation, so that no time is lost in discovering the point on the map when a landfall is made. "Astro-navigation" by the stars, with a special form of sextant adapted for use from aircraft, is extensively used, and is so accurate that a position can be determined to within about five miles.

Compared with this, the pioneers of Atlantic flying had to rely on dead reckoning. Their blind-flying instruments were crude or non-existent, and of de-icing apparatus they possessed none at all. There is no doubt that many of these

early flyers came to grief either through faulty navigation or from ice-formation on their wings or airscrew. When Corrigan flew the Atlantic in an ancient Curtiss Robin a year or two ago, he took with him a long curtain-pole in the cabin to knock the ice from the wings. That illustrates the outlook of the pioneers.

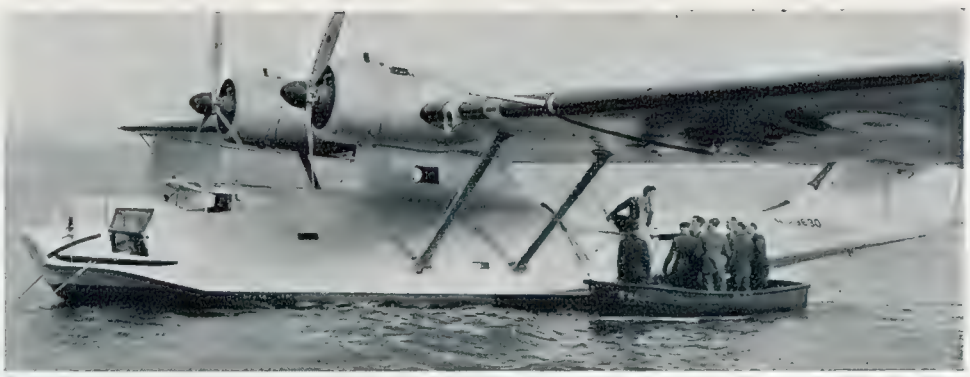
Compared with this the modern military aeroplane is fitted with every form of blind-flying aid, automatic pilot and comprehensive de-icing equipment. The pilot has absolute faith in his engines, whereas the old-timer was always waiting with beating heart for the miss in the beat of the engine which would mean disaster.

Four different types of aeroplane are being delivered by air from America at present. They are the Lockheed Hudson reconnaissance bomber and its bigger and faster brother, the Lockheed Vega Ventura. There is also the first of the Boeing B-17 bombers, the so-called "Flying Fortresses." All these types are landplanes. The fourth type is the Consolidated Catalina two-motor flying-boat. A single version of this type was flown across the Atlantic in 1939, the first military aeroplane ever to be delivered across the Atlantic by air. The success of this aeroplane service led to the big order for Catalinas which is now being delivered for coastal patrols.

These four types will be followed very soon by the first of the great Consolidated Liberator four-motor bombers, Consolidated Model 31 long-range flying-boats, and probably the Martin 162.

Another Martin aeroplane, the Maryland bomber, is doing great work in the Middle East. No details have been given of how these Martins have reached Egypt, but although some of them may have been flown from England by way of Malta, others may have been flown across the South Atlantic. Fortunately for the one-way traffic of American help, the prevailing wind across the Atlantic is from west to east, so that all the aeroplanes get its benefit and their journeys are speeded.

So, as the stream swells to a torrent and the torrent to a great flood, the Royal Air Force daily grows stronger through the devotion of the old hands of the civil air lines who cheerfully bear the brunt of the flying.



ONE OF THE AMERICAN BOMBERS, WITH A 4,000-MILES RANGE: This was actually the first American aeroplane, bought for service in the R.A.F., to be flown across the Atlantic. It was delivered to Felixstowe in July 1939, after having been flown from San Diego, in California, a distance of 5,700 miles, with only one stop—at Botwood, Newfoundland. The aircraft is a Consolidated 28-5. Others of this and similar types are now being ferried across the Atlantic

THE FLYING FORTRESS, or Boeing B-17 bomber, another of the four types now being flown across the Atlantic in one hop by a band of highly experienced long-distance pilots

On left—

THE LOCKHEED HUDSON, A HIGHLY SUCCESSFUL AMERICAN AIRCRAFT: This very fine aircraft—a military version of one of the most successful pre-war civil types—is used in considerable numbers by the Coastal Command, R.A.F. Together with the bigger Lockheed Vega Ventura, this plane is now being flown across the Atlantic for delivery here

THE FIRST AEROPLANE FLIGHT OVER THE ATLANTIC—Hawker's great feat in May 1919: On May 18, 1919, at 6.48 p.m., Mr. Harry G. Hawker and Commander Mackenzie Grieve, R.N., pilot and navigator, set off from St. John's, Newfoundland, in bad weather, in a Sopwith biplane for the first transatlantic aeroplane flight. The flight ended 14½ hours later, when the two daring airmen were forced down in mid-Atlantic through engine failure. For eight days they were given up as lost: they had been picked up, however, by the Danish steamer *Mary*, and later landed in Scotland. Although their failure to make land invalidated their claim to the *Daily Mail* £10,000 prize, they were nevertheless awarded a "consolation prize" of £5,000 by that journal. Very shortly afterwards the crossing was made successfully by Alcock and Brown. (*See picture on right*)

THE FIRST SUCCESSFUL FLIGHT—Alcock and Brown crash on landing at Clifden: Awaiting more favourable weather in Newfoundland, and also competing for the prize of £10,000 offered by the *Daily Mail*, Lieutenant J. Alcock and Lieutenant Whitten Brown set off for England on June 14, 1919, in a Vickers-Vimy-Rolls aircraft. Terrible weather conditions were encountered during the flight and the pilot and navigator had to contend with both fog and ice before winning through to clear weather. Sixteen hours after the take-off, they landed at Clifden in Ireland, but owing to the boggy nature of the ground, they crashed on landing—after having made the first *successful* crossing of the Atlantic by aeroplane. A few days later both men were knighted. The same year, in December, Alcock was killed in a flying accident at Rouen

BRITAIN'S FORTRESSES IN THE SEA

—A New Series of Pictures Just Released for Publication

COMMUNICATING WITH THE SHORE: NAVAL MEN SIGNALLING FROM THE STEEL-SHUTTERED SIGNAL STATION AT THE SUMMIT OF THE FORTRESS

A NAVAL AND A MILITARY OFFICER IN AN OBSERVATION POST KEEPING A JOINT LOOK-OUT FOR HOSTILE AIRCRAFT

THE NAVAL LOOK-OUT KEEPING WATCH ON THE MOVEMENTS OF ALL SHIPPING PAST THE HEAVILY ARMED FORTRESS

TOO GOOD AN OPPORTUNITY TO MISS: A SAILOR INDULGES IN A SPOT OF SEA-FISHING WHILST HIS ARMY COLLEAGUE STANDS ON GUARD ON THE "PIER"

Key points in the fixed defences on the southern coast of Britain are fortresses situated in the middle of the sea: during the last six months, with the threat of invasion coming nearer, these strongholds have been enormously expanded. To-day, they are manned by naval and military personnel, and strong batteries of the Royal Artillery are ready for instant action by day or by night. These structures—solidly built of steel and concrete—are crammed with guns, engines and machinery, and are equipped with searchlights, anti-aircraft guns, signalling stations and other necessary stores. When conditions permit, the members of the garrison are allowed to go ashore for 48 hours every three weeks

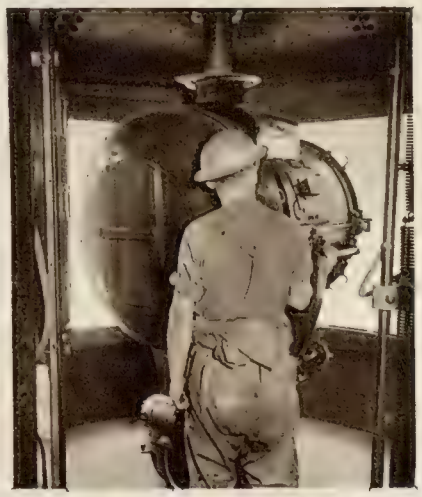
A 3-IN. ANTI-AIRCRAFT GUN ON THE FORT. THE GUNNERS HAVE BEEN VERY BUSY DURING THE RECENT AERIAL ACTIVITY OVER THE CHANNEL AND HAVE BEEN CREDITED WITH THE DESTRUCTION OF A NUMBER OF ENEMY AIRCRAFT

THE FORTRESS SET IN THE SEA: A BRITISH DESTROYER STEAMS PAST THE ISOLATED STRONGHOLD IN STORMY WEATHER
—*An impression by Montague Dawson*

THE BIG EVENT OF THE DAY. THE DUTY BOAT FROM THE MAINLAND CALLS WITH RATIONS AND MAIL: IT ALSO CONVEYS MEMBERS OF THE GARRISON ASHORE FOR LEAVE

THE SOCIAL CENTRE FOR THE GARRISON: THE CANTEEN AND RECREATION ROOM DOWN BELOW, WHERE THE MEN GATHER AFTER DUTY

COMING UP FROM THE INTERIOR, WHERE THE LIVING QUARTERS OF THE GARRISON ARE LOCATED



A COASTAL DEFENCE SEARCHLIGHT IN ITS STRONGLY PROTECTED CASEMATE WITHIN THE FORTRESS

THE MEN'S SLEEPING QUARTERS IN THE BOWELS OF THE FORTRESS: THEY SLEEP IN COMFORTABLE BUNKS SURROUNDED BY THE MASSIVE STEEL GIRDERS AND PLATES OF WHICH THE FORT IS CONSTRUCTED

RECRUITS—AND STILL MORE RECRUITS—FOR THE R.A.F.: This picture was taken at a well-known R.A.F. Recruit Centre, where volunteers are "sworn in" and where those who have received their call-up report for the first time. As one lot of recruits make their entrance to receive their uniforms, another party, wearing their new equipment, are ready to leave

AIR COMMENTARY—By C. G. GREY (Founder of "The Aeroplane")

The MEDITERRANEAN and the DIVE-BOMBER

The Cost of a Stuka as Against a Battleship; Our Rhineland Air Front; Shooting Parachutists; The Song of the Little Guns

MEDITERRANEAN affairs are becoming very interesting to those who can look at them dispassionately from the technical point of view, and free from prejudice in favour of particular weapons, services or nations. First let us consider that attack on our sea convoy by the Junkers dive-bombers from Catania in Sicily.

Such eye-witnesses' reports as we have come from newspaper men in the British warships. Making all allowances for the fact that some of the most potent impressions were received while the writer was, by his own account, very sensibly lying with his nose on the deck, we may accept the facts that (*a*) most of the bombing was done by single-motor, two-seat Junkers Stuka dive-bombers; (*b*) that they came down very low; (*c*) that they dropped very big bombs—which may have come from bigger bombers higher up; (*d*) that a lot of them were shot down; and (*e*) that they did a lot of damage.

Now, a dive-bomber, especially a Stuka diving on a target, is about as immobile as is a hen with its beak on a chalk-line. That was how our Defiants in Flanders were able to range up alongside them and blow their insides out with broadsides from their four-gun turrets. They are less vulnerable to stern attacks because the aft gunner covers the tail, but he cannot swing his guns to bear on a broadside attack. If a dive-bomber is put off his stroke by being forced to swerve either by flak-fire or air interference, he is a very harmless person.

Now supposing, to be generous to the Fleet Air Arm, we allow that they shot down a dozen Stukas, and that the ships' guns got another half-dozen, and that a subsequent raid on Catania destroyed a dozen more on the ground. That makes thirty aeroplanes lost, and perhaps forty men.

Assuming that a Stuka costs £8,000—as a Hurricane or Spitfire is supposed to cost £5,000, it should not cost as much as £8,000—the German loss was £240,000. We lost the *Southampton*, which, I imagine, cost some millions of pounds, and the incidental damage to the *Illustrious*, and whatever damage was done to other warships and merchant ships.

Also, I suppose that we lost many more than forty men. The communiqué says that "the great majority" of the *Southampton's* people were saved. If only forty were lost, the communiqué would probably have said "almost all were saved." And there were casualties in the *Illustrious* also.

This affair brings up the twenty-five-year-old argument on Air Power *versus* Sea Power—which is as undecidable as Shell *versus* Armour. But if so much damage can be done by £240,000-worth of aeroplanes, what could be done by a few million pounds'-worth? Remember that a Beaufort torpedo-dropper costs only a fraction of the price of a tramp steamer.

Brigadier-General William Mitchell, since deceased, who commanded the U.S. Army Air Service (now the Air Corps) in France in 1918, and himself led into the air in the attack on the Argonne Forest the strongest force of aeroplanes which has yet been used in one action, gave the U.S. Navy a jolt on that subject a year or so after the war of 1914-18.

The U.S. Navy took over a surrendered German battleship and a cruiser for experimental work. They were anchored about 80 or 100 miles out at sea, a joy-boat full of admirals and pressmen was sent out to watch, and the U.S. Naval Air Service was sent to drop small bombs on the German ships to show that aeroplanes could not sink warships.

Just when the Naval aviators, thoroughly fed up, had finished their job, along came Bill Mitchell, followed by three or four heavy bombers — land-planes 100 miles out at sea, a big risk in those days—and planted a few 1,000-lb. and 2,000-lb. bombs round the ships. One fell alongside the cruiser, hove her out of the water, and broke her back. She sank in a few minutes. Another big bomb fell under the stern of the battleship, and so wrenched the structure that she sank some hours later.

The admirals nearly had apoplexy.

My argument for twenty years has been: a battleship costs £6,000,000 (to-day, it costs nearer £10,000,000). A bomber costs £10,000 (to-day it may cost £20,000). So for £1,000,000 you can have 100 bombers (say fifty at to-day's price). If all those bombers, some carrying torpedoes, are flung against one battleship, they may lose twenty-five or fifty of their number, but they will put that ship out of action for keeps, or the duration.

If twenty-five Stukas did all that damage to the *Illustrious* and the *Southampton*, what could 100 of them have done, or 500? That is what we have to face in the Mediterranean. And that is where our wonderful luck seems to hold.

Now that our new fighters are coming through, we can spare Hurricanes and Defiants for Malta and Africa, and they are more than good enough to tackle Stukas and the standard-type German bombers. Also, now that we hold the coast of North Africa right past Tobruk, our fighters can use the Italian aerodromes when escorting ships in-shore from about the longitude of Benghazi. But there is still a long stretch across the Gulf of Sidra, or Benghazi, before they can help over that narrow piece between Sicily and Malta and the Italian island of Pantelleria—"Panty-le-reeah," please, not "Pantel-leeriah," as commonly spoken.

If the Admiralty or the Air Ministry wants to do a Good Thing, it might issue to the Press, and so to the public—who do pay its wages, however inadequate—some photographs of Pantelleria, that mysterious island which has been described as an unsinkable battleship between Sicily and Tunis. The R.A.F. at Malta, or the Fleet Air Arm, must have taken dozens of pictures of it in front, end and side elevations and in plan. And if not, why not?

Madame Tabouis, that great mistress of romance, once said that the *Regia Aeronautica* had landed 400 aeroplanes on it. On the maps it hardly looks big enough for one and a catapult—like H.M.'s cruisers. But if it has an aerodrome it should be a much better base for attacks on our shipping before it gets to Malta than Catania in Sicily, which is eighty miles

THE ONLY AMERICAN PILOT TO FLY A BRITISH BOMBER: Pilot Officer "Charlie" Whitehead, of Brooklyn, New York, is the only American bomber-pilot in the R.A.F. Bomber Command. Formerly he flew thousands of miles piloting trans-Continental air-liners in America; he also had his own flying school, in which he was Chief Instructor. He was the first American to teach Chinese pilots in the war against Japan. When he arrived in England to join the R.A.F. he fully expected to take up a bombing plane immediately, but was surprised to discover that he had to start his training from the beginning before being "passed out" as proficient! Here Pilot Officer Whitehead is seen on return from a flight, whilst mechanics begin to give his aircraft an overhaul. Other American citizens who wish to serve with the R.A.F. now have their own Squadron (the "Eagle" Squadron), exclusively reserved for their nationals

overland from the shipping lane between Sicily and Malta, on which the attacks are probably made after the convoys have passed Malta.

We have fine big aerodromes on Malta, but I fancy the difficulty would be to protect our fighters from bombs if we sent a lot of them there to protect our shipping. As Malta is mostly rock, cultivated in terraces filled with artificial earth, there is no open country round about for dispersal points or satellite landing-grounds. So, unless somebody has driven tunnels under the terraces in which aeroplanes can be stowed, Malta is a more difficult or precarious base from which to work fighters or bombers than is Catania, which can be reinforced as needed from the mainland of Italy.

But evidently the protection of convoys to Egypt—and shortly to Tobruk and soon to Benghazi, and later, we hope, to Tripoli—is going to be for some time a major problem for the Admiralty and the Air Staff. Here is where close convoy work is necessary for protection against air attack, unlike the Atlantic, where air patrol of the steamship lanes against sea-raiders and submarines should leave merchant shipping free to go full steam ahead individually.

Another, and equally interesting, phase of the war seems to have started with our air attack on the Northern French aerodromes on January 10. At present the range of such attacks is limited by the short range of our fighters. But they can well afford to go 100 or 150 miles inland from the Channel, escorting our light and medium bombers. And that means pushing our air frontier a goodish way back towards Mr. Baldwin's (not yet a Lord) hypothetical frontier on the Rhine. We may even see that come true some day. Remember that our King George I (1714 A.D.) was Elector Palatine of all the Rhineland and King of Hanover, and so were his successors up to William IV (1837 A.D.)—120 years.

The fighter pilots who were on the job saw it as a joyous adventure, and felt just as superior as they did during the Dunkirk affair and the September battles over the Channel. As all the senior people in the R.A.F. to-day, especially on the Air Staff, remember how we gave away samples of all our new types of aeroplanes to the Germans from 1915 to 1918, by sending them into action in ones and twos or a dozen at a time I suppose that we can trust them not to send over any of our new high-performance, long-range fighters till we have enough to get the full benefit of shock action, mass attack, and surprise all at once

The new night-fighters are a different affair. They can be tried out one at a time, with varieties and variations of the "delicate instruments" which the communiqué mentioned. For when they succeed the enemy will never know what hit him, and will not go home to tell the tale. And if one or two do not succeed, the enemy will never know that anybody tried to hit him.

There again, I assume that only very trusty pilots are chosen for these machines. The old-timers will remember that when the first F.E.2d. (the big pusher-biplane with a Rolls-Royce Eagle) was sent to France in 1917 to be inspected at St. Omer, the pilot, with a staff officer of the Army as passenger, flew straight over the St. Omer aerodrome and landed at Lille, where the Germans were much interested and amused.

Also the first twin-motor Handley Page bomber to go to Eastern France got lost in a storm and was landed behind the German lines (in Hunland, as we used to call it). We must be careful not to let such things happen this time.

The number of aeroplanes destroyed on the ground in those raids in France, and in the Albanian campaign and in North Africa, have rather spoiled the use of aeroplanes as a unit of value in measuring success or losses. Half-a-dozen shot down, twenty or thirty destroyed on the ground and forty or fifty wrecks captured at Bardia or wherenot, begins to mean that they are not worth counting any more.

About 1916-17 the Royal Flying Corps had a shockingly bad engine designed by the Royal Aircraft Factory at Farnborough, called the Raf—the Royal Air Force did not exist then. It shed its cylinders on the slightest provocation, which was most disconcerting to an inexperienced pilot some thousands of feet up in the air, and, as G. H. Handasyde, the famous aeroplane designer, said, in his pawky Glasgow way: "If you run it on the bench for ten minutes, it becomes a glowing mass."

The chief of one of the firms which rebuilt the R.F.C.'s damaged motors, after dealing with some dozens of these Raf engines, remarked: "I never realised before that engine-cylinders came under the heading of Consumable Stores."

THE FIRST PICTURE EVER TAKEN OF TORPEDO-CARRYING AIRCRAFT OF THE FLEET AIR ARM FLYING IN FORMATION: These two pictures were taken at a station where naval pilots receive instruction in tactics, workshop routine, loading torpedoes on to aircraft and actual practice on target ships. The aircraft are Albacores, the Navy's latest torpedo-carrying aircraft; and the above picture is the first taken of a formation flight of these fine aeroplanes

A PILOT OF THE FLEET AIR ARM WATCHES A TORPEDO BEING LOADED ON TO HIS AIRCRAFT BEFORE TAKING OFF FOR A PRACTICE ATTACK ON A TARGET SHIP

I may add that the Napier Company, whose Lion and Dagger engines have done so well in the past, made the Raf into quite a good engine. I hope that we shall hear a lot more of the Napier's achievements soon.

In this war, we are getting to the stage when the whole aeroplane is a Consumable Store, and is of less account to the individual taxpayer than is the personal possession of a gallon of petrol. The only thing that does count is whether the pilot is put out of action for the duration of the war.

Which brings up the subject of shooting people who have baled out with parachutes from smitten aeroplanes. Of course, troops on the ground will always shoot at them, and will seldom hit them. Height, distance, speed of descent and speed over the ground are too many variables for a soldier to judge.

Home Guards should note that fact, and not shoot till the parachutist lands. Like the ancient story of the French sportsman, "Vait till 'e stop"—don't shoot him when flying or running. A Gunner friend of mine told me that in Flanders a chap baled out of a Dornier at about 1,000 ft. and came down with a dozen Brens firing at him. He was picked up with a scratch on one finger.

The question is, should a fighter pilot or an air-gunner shoot at a man who has baled out? Most of my fighter friends say that he should, but that they would not care to do so themselves, although they know some fellows who would, especially foreigners.

Theoretically the answer is this: If an enemy has baled out over our territory, or territory held by us, he should not be shot. Apart from the fact that he is entitled by the rules of war to have a chance of life and of being taken prisoner, he has a high value to the Intelligence Department, and should be preserved for their benefit.

On the other hand, if he is going down into territory, or territorial waters, which his people control, so that he may, whether wounded or not, take the air again as an enemy, he should be shot. And even then I doubt whether the average English pilot would shoot. We are a sentimental people.

Which leads to the subject of armament. There is great argument among fighter pilots and gunners about the relative value of guns of different calibres. A lot of the American fighters have Colt guns which carry a ·5-inch bullet. Remember the historic and traditional ·45 Colt six-shooter of the Wild West. These fire at 900 shots per minute, against the ·303 Browning's 1,200 per minute. The rivalry again between the old six-shooter firm and the makers of the famous "automatic" pistol is entertaining.

The apostles of Colt swear that a solid ·5 will go through any armour an aeroplane can carry. "Ah, yes!" say the Browningites, "but it won't saw a wing off the way twelve ·303s at 1,200 a minute will." As one fighter pilot said to me: "You know, a self-sealing petrol-tank won't keep a wing on *firmly*, when a bunch of ·303s have gone through the spars."

Then there are the advocates of the ·787-inch (or 20-mm.) cannons—the German Solothurn, the Swiss Oerlikon, and the Franco-Hispano-Swiss Hispano-Suiza. The Suiza did well in Spain in the Savoia bombers against Russo-American fighters, and against transport on roads.

Why have we no Kipling to sing "The Song of the Little Guns"? What names they have. Ulick Dahlgren's gun of the American Civil War; the Gardner of the 1880-90 wars in the Sudan; the Hotchkiss, with the long racks of cartridges, beloved of Naval shore parties, "when sailorman go soldier-walkee"; old man Maxim's first belt-gun; the Vickers-Maxim which followed it, and to-day the Vickers "K" gun; the American Lewis, with its drums; the clumsy but stout German Parabellum of the last war, even the comic double-ended Davis, which shot both ways; and now the Colt, Browning, Bren (or Brno), Oerlikon, Solothurn and Suiza. What material for a man's poet.

Now, quite another subject, pure heresy: Are roof-spotters, facetiously and erroneously called "Jim Crows," worth while? Watchers, yes, very much so, but in an office on a direct telephone to Fighter Command, R.A.F., whither the Observer Corps posts report every movement of enemy aircraft?

Look at it this way. A fairly fast bomber does 240 miles an hour, or four miles a minute. Suppose the people in a factory need three minutes to get into their shelters, and suppose that a high-flying bomber releases his bomb two miles before reaching his target (if any). Then the spotter would have to *recognise* the enemy aeroplane fourteen miles away.

That is to say, a spotter on St. Paul's (or thereabouts) would have to see and spot the machine somewhere about Croydon, or Esher, or Heston—which is absurd, Q.E.D. And if he waited till the machine was close enough to *recognise* as an enemy—say two miles at 20,000 ft. or so—the bomb which was meant for his address would already have been dropped.

So, except for the Observer Corps in the open country, who have to recognise enemy aircraft, if low enough, and report to Fighter Command, and, of course, the R.A.F. air-crews themselves, all this recognition business, and photographs and silhouettes (silly wet things, one chap called them) and models, are just a waste of time and money.

What the watchers of factories need is instant and reliable warning of the *tracks* of enemy aircraft by day and night. There is no need to look for them. It could all be done better and more reliably and safely in a deep dugout.

Fire-spotters to watch for the fall of incendiary bombs are a different business. They are about the most needed of A.R.P. personnel.

THE PROBLEM OF DEFENCE AGAINST THE DIVE-BOMBER IN NARROW WATERS MAY BE SOLVED BY MAINTAINING CONTINUOUS PATROLS OF FIGHTER AIRCRAFT FLOWN FROM THE DECK OF THE AIRCRAFT-CARRIER: The vulnerability of the dive-bomber to fighter attack is well known. So long as fighters are in the air the success of the bomber is very limited. It would seem, therefore, that one of the solutions to the problem is to maintain a constant patrol from the deck of the aircraft-carrier. Only two or three aircraft need be in the air at a time, but as one patrol returns to the carrier another must be taking off to take its place. By this means the whole of a narrow channel—such as that between Sicily-Pantellaria-Africa—can be watched and the element of surprise by the dive-bomber obviated. In this picture the aircraft seen taking off are Fairey Fulmars of the Fleet Air Arm—"Spitfires of the Navy," as they have been called

The DIVE-BOMBER versus the ROYAL NAVY

What the Dive-Bomber is, and What it Can Do at Sea

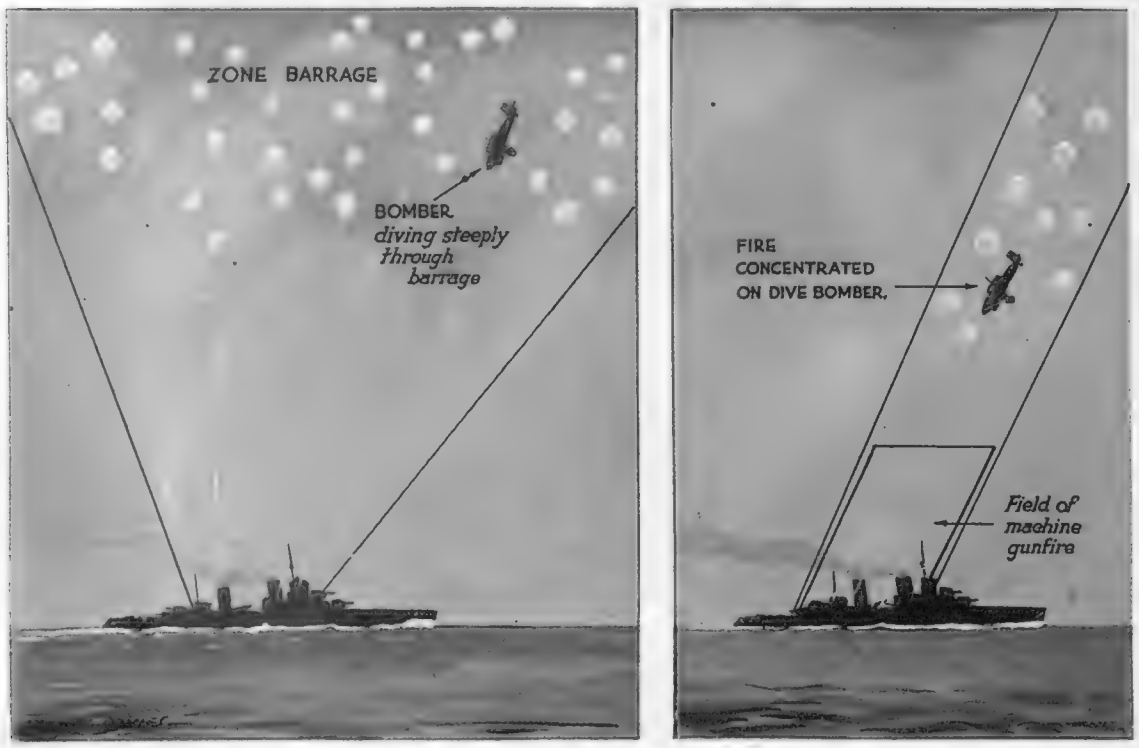
WHEN the present war opened, it was soon discovered that the Germans were expecting great things from their dive-bombers—the Junkers Ju. 87 with which they attacked Poland, Norway, Holland and Belgium in turn. When the dive-bomber appeared over the Channel and the south coast of Britain, however, the R.A.F. very quickly shot it out of the skies. Designed for one purpose—and one purpose alone—its vulnerability was soon exposed.

Having thus suffered total eclipse, the Ju. 87 was banished from Northern France—only to make its reappearance in the Mediterranean, where, in fact, its presence had long been expected. It is the obvious hope of both Germans and Italians that by means of air attacks on naval forces the comparatively narrow channel from Sicily through Pantellaria to the North African coast will be kept open for the reinforcement of the Italian forces in Libya and that the Royal Navy's supremacy of the Mediterranean will be checked by the closing of this channel, thus forming another Gibraltar and a bottling-up of the Fleet.

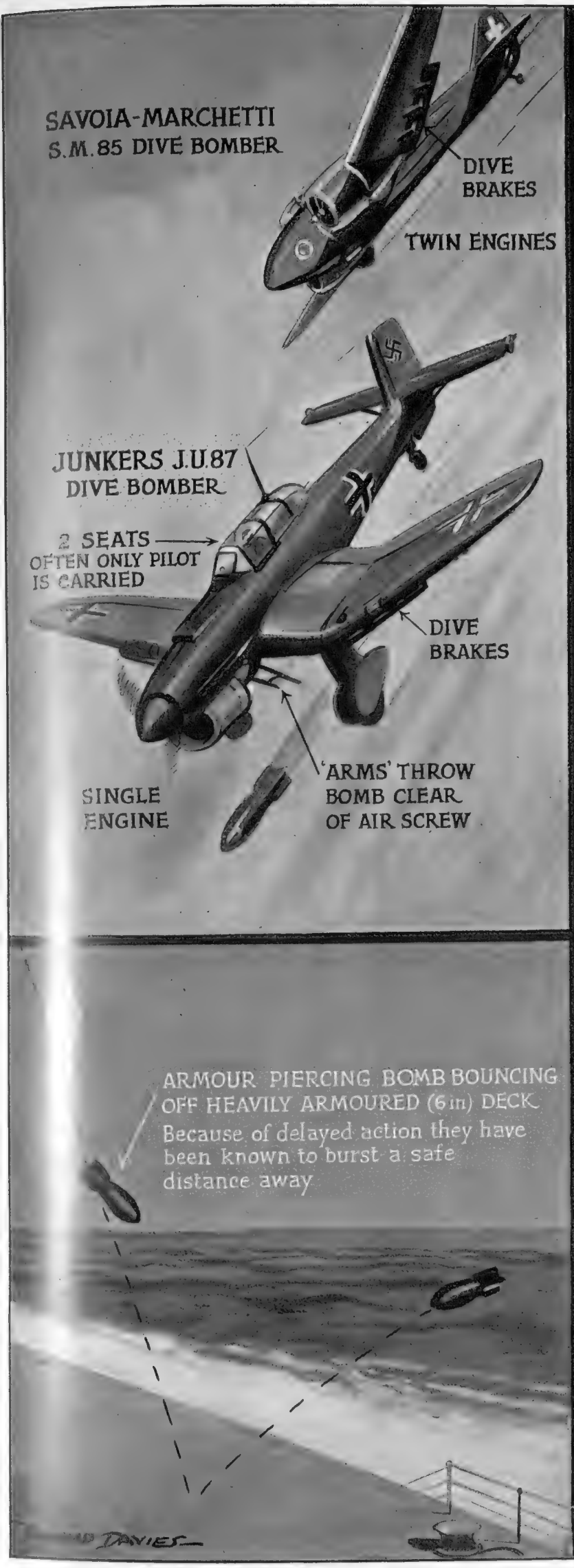
In its first essay the dive-bomber achieved a certain measure of success: the aircraft-carrier *Illustrious* was hit, and the cruiser *Southampton* was lost. The convoy being escorted got through safely, it is true; but the dive-bomber had justified itself once again, although a substantial number were destroyed in the attack itself.

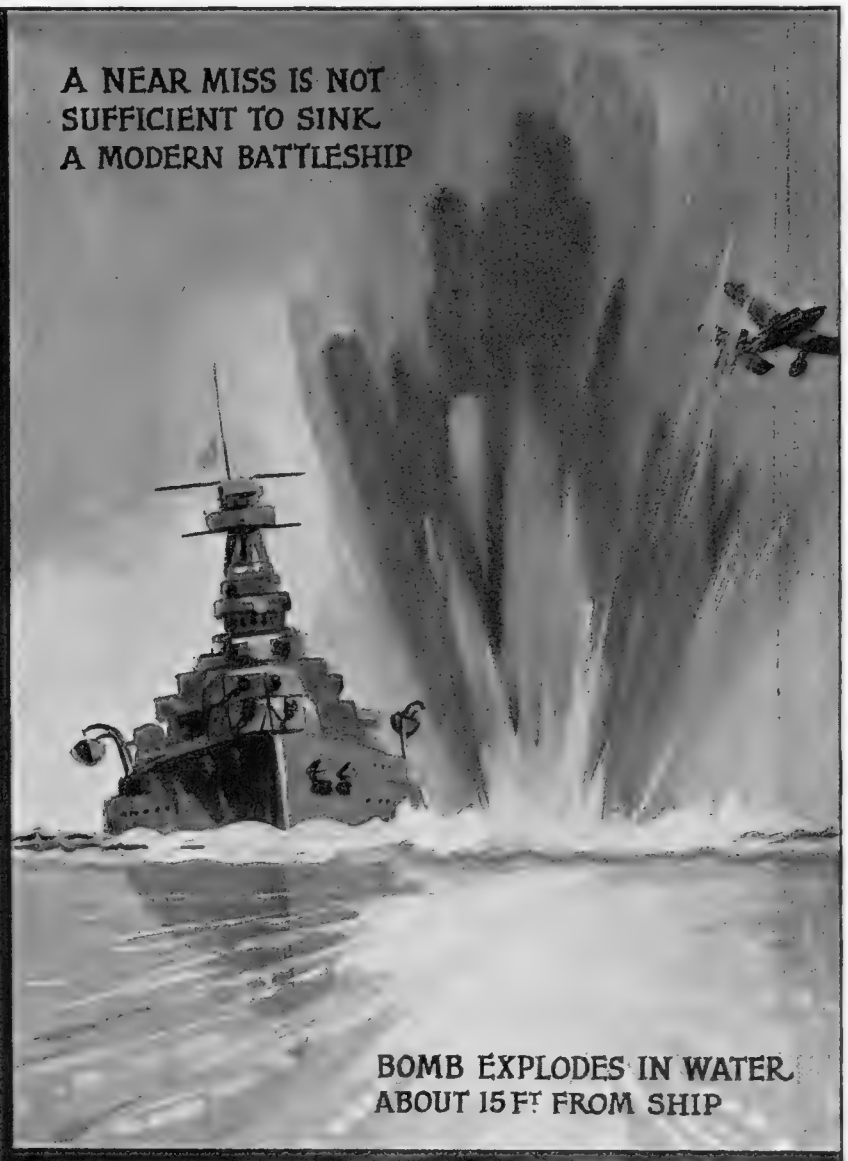
The answer to the dive-bomber will undoubtedly be forthcoming in the Mediterranean, just as it was in attacks on Britain. But it must be remembered that the German aircraft are based on land, they are operating in narrow waters, and they have a good number of aircraft which they are willing to sacrifice if they can see an adequate return. On these pages we present the problem, together with considerations which should be studied in assessing the nature of this new threat.

A CLOSE-UP OF THE FAIREY FULMAR—THE NEW FIGHTER OF THE NAVY: This aircraft was designed to be fast enough in the air to hold its own with land-based aircraft, and yet to have a low landing speed for work with aircraft-carriers



ONE OF THE LESSONS OF THE ACTION OFF SICILY MAY BE A DIFFERENT SYSTEM OF APPLYING THE ANTI-AIRCRAFT BARRAGE: Once the dive-bomber has begun its dive its path remains constant. If, therefore, the anti-aircraft guns can be so fired that they put up an absolute wall of shells throughout the whole downward descent, the bomber stands a very small chance of escape. If, furthermore, this barrage is supplemented by a concentrated fire from the light machine-guns as the dive-bomber approaches the vessel, its destruction soon or late is almost certain

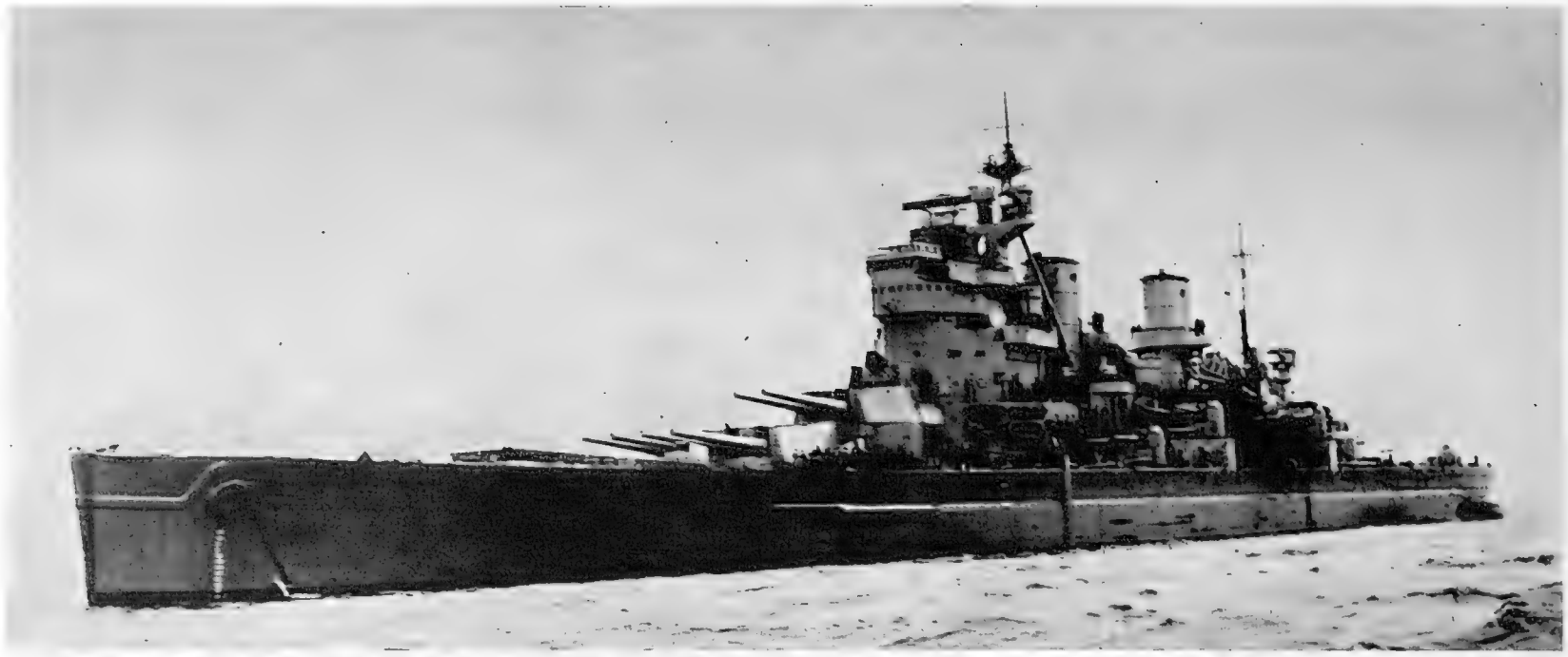




Drawings by Roland Davies

CHARACTERISTICS OF THE DIVE-BOMBER—HOW IT ATTACKS WITH HEAVY BOMBS AND HOW STRONG ARMOUR-PLATING CAN DEFLECT ITS BLOWS

There are two principal types of dive-bombers possessed by the enemy—the Junkers 87 of the German *Luftwaffe* and the Savoia-Marchetti 85 of the Italians. The former is the one best known to this country, and is the type which was employed recently against the British Navy off Sicily. It can carry a crew of two, but often only the pilot is carried. Its load consists of one heavy bomb of 1,100 lb. (half a ton) and four bombs of 110 lb. each, carried under the wings. After these bombs have been released the plane can perform no other useful function and returns to its base straightaway. When operating against modern battleships a near miss is as good as a total miss, because even a heavy bomb can do no damage against heavy armament. It is for this reason that the dive-bomber carries out its dive at such a steep angle because by this means it can aim its missile with so much greater accuracy. When attacking a battleship armour-piercing bombs are often used : the decks of a modern ship of war are often as thick as six inches, and only such bombs stand a chance of success. But these armour-piercing bombs have a slightly delayed-action fuse : if they fall sideways they may even bounce off the warship's decks because of this fuse-setting and explode harmlessly some distance away



THE FIRST PHOTOGRAPH OF H.M.S. "KING GEORGE V," FIRST OF HER CLASS TO BE COMMISSIONED AND NOW ACTUALLY IN SERVICE WITH THE FLEET

BRITAIN'S LATEST BATTLESHIP

—H.M.S. *King George V*

A Note by FRANK C. BOWEN

THE photographs of *King George V* show that the unofficial forecasts of her features, both in this country and abroad, have been tolerably accurate as far as they went. A few official details had already been published—that she was to have a displacement of 35,000 tons and a main battery of ten 14-in. guns—but most of the information available was semi-official at the very most. Yet it seems to have been quite reasonably accurate.

The photographs show the two funnels which had been anticipated; the bridge and control structure, from which the ship is navigated and which houses the fire-control instruments, which, according to official statements, cost well over £200,000, is even bigger than that of the *Nelson*, but it is without the stark ugliness which earned it the nickname of "Queen Anne's Mansions" in the earlier ship. The signal mast, which is abaft the funnel in the *Nelson* and well away from the bridge, is now back to its old and much handier position—as close to the bridge as possible.

The 14-in. gun was chosen on account of its advantages for salvo-firing, and ten were mounted against the nine 16-in. in the *Nelson*. The *King George V* has two colossal quadruple turrets, one forward and one aft, and firing over the former is a double turret. One quadruple turret, with its thick armour, weighs much less than two double, and is more easily controlled, against which there is the obvious risk of putting so many eggs into one basket. That is a risk which has to be taken, for it would be impossible to get the advantages of concentration and control by any other arrangement.

In accordance with the old British tradition, the major power is forward, and in the event of the *King George V* having the job of chasing one of the Italian *Littorio* class, of the same displacement, back to the protection of her fortified bases, she would bring six 14-in. to bear against three 15-in.—9,360 lb. of shell against about 6,000—while if the chase were 30 degrees or more on either bow, as she might well be, all ten guns would bear and the weight of metal would be no less than 15,600 lb.

The colossal weight of the two forward turrets makes it necessary to set them well back, otherwise the ship would plunge badly in a head sea and would inevitably lose her speed. This fact, coupled with the high freeboard and sheer (upward curve of the deck), suggests that she is a fine sea boat.

The anti-torpedo guns of medium calibre—6-ins. or the new 5·2-ins.—are arranged in turrets after the fashion of the *Nelson*, but instead of three turrets on either side, arranged in a pyramid, there are four, so that an enemy approaching from the broadside would be met by the concentrated fire of eight of these guns, and from dead ahead or dead astern by four.

The light catching the top of the armour belt shows it to be a very thick one—unofficial reports give it 16 ins. against the 14 of the *Nelson*—and very much longer than in the older type. The position of the cranes for handling aircraft proves that the catapult is amidships, although it does not actually show; that is in accordance with modern British practice.

AN ARTIST'S IMPRESSION OF THE WORLD'S MIGHTIEST BATTLESHIP—*H.M.S. "King George V," from a Drawing by Oscar Parkes*
She displaces 35,000 tons and has a speed of over 30 knots. Her main armament consists of ten 14-in. guns mounted in two quadruple and one twin turrets, with sixteen 5·2-in. guns and multiple pom-poms. She was built at a cost of £7,000,000: although her exact speed is a secret, it is known that she is faster than any other British battleship

OUT IN THE DESERT: A WOUNDED SOLDIER BEING OPERATED ON IN A HOSPITAL TENT:
British arrangements were completed down to the last detail before the final assaults were made at Sidi Barrani, Bardia and Tobruk. At Bardia, the large number of Italian wounded received expert medical attention on the spot before being sent back to the bases

HOW THE ITALIANS AT BARDIA WELCOMED THE ARRIVAL OF THE AUSTRALIANS:
A graphic picture taken on the battlefield. It is still incomprehensible why the enemy should surrender in this fashion, although it has been stated that many of them have been bombarded almost into insensibility before the final assault has been launched

AFTER THE CAPTURE OF BARDIA

Official Photographs of Abandoned Material in the Western Desert

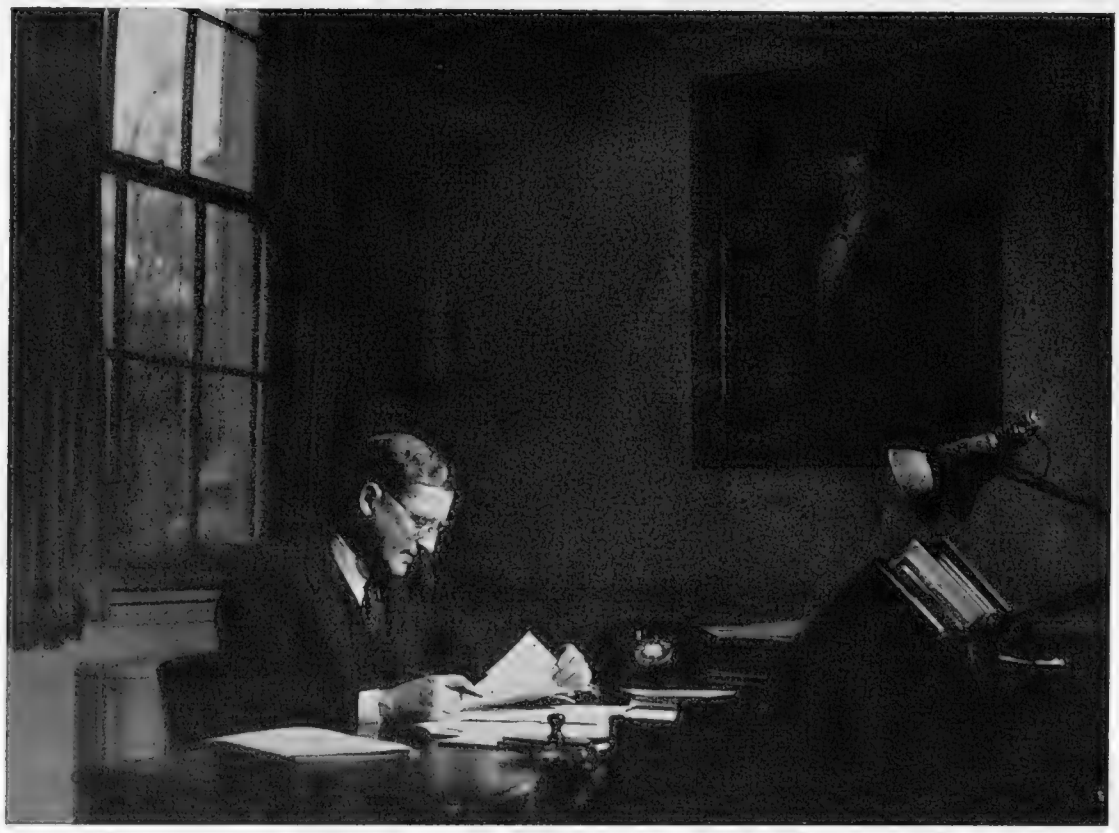
Above —**THE DESERT ABOUT BARDIA STREWN WITH ABANDONED ITALIAN WAR MATERIAL.** *On right*—**THE DESERTED ITALIAN DEFENCES AND CAPTURED TANKS OUTSIDE THE TOWN :** Not the least surprising part of the campaign in the Western Desert has been the vast quantity of war material captured from the Italians. Tanks, guns, lorries, small arms—in great numbers—have all been taken by the advancing forces : some of this material can be put to good use by us elsewhere

DESPITE ATTEMPTS AT BOMBARDMENT FROM THE AIR BY THE ITALIANS, SOLLUM IS STILL BEING USED BY THE ARMY AND NAVY

In the earlier stages of the campaign against Bardia and Tobruk, Sollum possessed the advantage of being the nearest port with good docks organisation to the front line. Now, however, we enjoy the better facilities provided by our more recent captures. At both Bardia and Tobruk not only are there good anchorages and quays, but our supply vessels are nearer the actual fighting zone. Sollum is, however, still being used, as this picture which has just arrived in England demonstrates

A BURNT-OUT ITALIAN LORRY ON THE LINE OF RETREAT : One of hundreds of such vehicles lost to the enemy—abandoned by him for various reasons (amongst them lack of petrol) in the precipitate retreat along the coast road in the Western Desert

AN ITALIAN GUN AND ITS TENDER, ABANDONED ON THE ROAD TO BARDIA : Apart from his losses in men, the enemy has suffered huge losses in equipment such as this. It is difficult to see how such losses are to be made good by the Italians



THE MAN WHO DOES THE WORK, AND THE CONTROLLER OF THE EMBASSY DURING THE PRESENT INTERREGNUM PERIOD : Mr. Herschel V. Johnson, Chargé d'Affaires at the United States Embassy in Grosvenor Square. He was born at Atlanta in 1894 and has been in the Diplomatic Service since 1920. He went to Berne in 1921 and Sofia in 1922-23. From 1924 to 1926 he was in the Department of State at Washington ; thence he went to Honduras till 1928, when he was promoted to First Secretary at the Embassy in Mexico City. Upon his return to Washington in 1930 he became Chief of the Division of Mexican Affairs. In 1934 he was appointed First Secretary of the Embassy in London, and he has been Counsellor since July 8, 1937. During the last war he served with the U.S. forces

WHO IS AMERICA IN LONDON

The Men Who Represent the United States in Britain

By GORDON BECKLES

THE most business-minded Embassy in London is awaiting with interest, but not with undue anxiety, the arrival of its new Ambassador.

Not with anxiety, because, whether an American Ambassador or not, the work of the U.S. Embassy goes on with machine-like precision.

This is a strange reversal of affairs, for until the last decade the U.S. Embassy in London has been distinguished by nothing so much as a notable lack of the facilities enjoyed by much smaller nations.

In the first place, there was no official residence for the Ambassador. He was a rich man, a moneyed contributor to the political party of the President, who appointed him, and it was expected that he should enjoy the honour of spending money won in commerce on the elegancies of the post of Ambassador to the Court of St. James.

So it came to be expected that the appointment of a new U.S. Ambassador meant the selection of a new U.S. Embassy. The office staff pigged it as best they could in various quarters about the town. There was nothing resembling the British Embassy in Paris, for example, where the Embassy was (and will be again) a community in itself, with self-contained, extra-territorial rights : a residence, a palace, and an office with living accommodation.

A dozen different mansions have sheltered U.S. Ambassadors (and a good few hotel rooms, too), from the late Grosvenor House, owned by the Duke of Westminster, to Crewe House, in Curzon Street, whose window-frames and sides have recently absorbed, with equanimity, the force of a bomb.

Joseph Choate, Walter Hines Page, James Lowell, Franklin Kellog, Andrew Mellon, James Monroe and John Hay—all men distinguished above mere political interest—have known not one but many office-window views of London.

Not even the post-war prosperity enjoyed by the United States gave its Foreign Service the money and attention which were its due. There was a long tradition of bickering between Ambassadors and Ministers abroad and (especially in suspect London, with memories of 1776) the Secretary of State in Washington, who corresponds to the Foreign Secretary in the British Government. Besides, anti-English bias has prompted, even in recent years, grave and deep suspicions in the minds of many Americans about the anglicisation of Ambassadors accredited to London. The first question asked by reporters of a new appointment is a sternly demanded : *" Are you going to wear knee-pants when you go to Buckingham Palace ? "*

The result was a neglected Embassy, until No. 1, Prince's Gate came into possession of the U.S. Government a few years ago as an official residence for its Ambassador.

Then came the decision to take quarters for the Embassy and consular staffs. The former were in Grosvenor Gardens, in rather forbidding buildings, while the Consulate was in Cavendish Square.

Mr. Bingham once gave me a lift in his car, after breakfast at Prince's Gate, to Grosvenor Gardens, and expressed himself with undiplomatic force on the way—that was in 1936—in which his staff were treated in the matter of accommodation, which was neither dignified nor efficient.

The present new Embassy in Grosvenor Square now houses the joint staffs, an imposing building, even if only 25 per cent. of the actual space is occupied by the diplomats. But it is a formidable corps, over which Mr. Herschel V. Johnson rules with kid gloves.

Mr. Herschel V. Johnson does the work, let who will make the speeches and pose in the limelight. He is the Chargé d'Affaires, and has been in London since he was appointed First Secretary in 1934. He is a man of middle age, looking about forty, with the easy manners of the professional diplomat (or what is known as a " career " man in the United States) and a connoisseur's taste in life. Like Lord Lothian, he is a bachelor. His private interests are scholarly and he is interested in the collection of Chinese porcelain, although he has never served in China. After Harvard Law School he went to France in the U.S. Army, and made his European diplomatic debut at Berne in 1921. Then came Sofia, Mexico City and finally London.

His job is worth 9,000 dollars, with expenses, which, at a rough rate of £2,100, is slightly lower —if anything—than the corresponding pay in the British Diplomatic.

But for the past three months Mr. Herschel V. Johnson has been the United States of America in London. His despatches have daily informed Mr. Hull and President Roosevelt. The burden has been a heavy one in the peculiar—indeed, unique—conditions.

THE HUGE MODERN OFFICE BUILDING WHICH NOW HOUSES THE UNITED STATES EMBASSY IN GROSVENOR SQUARE

The Ambassador's job, by the way, is worth 17,500 dollars, which is on a level with our own rewards to our envoys in Washington and Paris. But as there has not been a poor American Ambassador of recent times, the actual salary is only a drop in the bucket.

The Embassy in Grosvenor Square is steam-heated to the American degree of steam-heat. The men in the passages wear the more loosely-built clothes of American tailors, and the cigarettes offered you are Camels or Luckies. Telephones ring with American insistence, and conversations are of an American degree of length and warmth. There are over 200 telephone extensions in normal use ; and most of them are being used all the time.

After Mr. Herschel V. Johnson comes a First Secretary, who is also Consul-General, and then seven other secretaries. This is just the start of it. Listed at the moment under Colonel Raymond E. Lee, Military and Air Attaché, are six assistant military attachés ; while under Captain Alan G. Kirk, the Naval and Air Attaché (there are both Army and Navy air services in the United States), are no fewer than seventeen assistant attachés, most of them lieutenant-commanders. Several times recently this number has been swollen by visiting missions. But at any time the liaison between the Admiralty here and the Navy Department in Washington is very close.

Since July, five generals, six colonels, ten majors and five captains—from every branch of the U.S. Army—have been sent to Britain.

Then there are eight Consuls, eleven Vice-Consuls and attachés who concern themselves with agriculture and commerce. Altogether the principal members of the Embassy staff amount to over fifty.

Only the Berlin Embassy rivals this in Europe, the number of military experts accredited there being similarly generous. When one considers that one British naval attaché before the war sometimes had a beat of four or five countries to cover, the extent of the American coverage can be better appreciated. There is, of course, the welding of consular and diplomatic services, which for remote reasons is not in force in our Foreign Office regime at present.

There are no drawing-rooms or foyers, no picture galleries or salons in Grosvenor Square. It is a good deal less impressive than many banks. Even the Ambassador's room is a business-like apartment on the first floor, leading direct off the corridor.

Prince's Gate has been closed, not only because there is no Ambassador (and has been, for some time, no Ambassador's wife), but because it does not lend itself to wartime conditions. It is an old building, with no adequate shelter. A great deal of the clerical staff is also dispersed around London, some at Epsom and others at Ascot.

When war came, several people with big houses in the country offered them to Mr. Kennedy. Lord Derby was one and Mr. Pierpont Morgan another, Mr. Morgan being a Grosvenor Square neighbour. Then came the great child-evacuation scheme, frustrated by the U-boat danger. For this the Embassy—with American thoroughness — took over the ball-room of Grosvenor House for clerical staff.

The sum of all this is that when the new Ambassador arrives he will find a staff of experts and clerks capable of expansion, and. prepared to carry on with emergency embassies in at least two parts of the country near London, should the Grosvenor Square block suffer from enemy action.

" We 're just an office, like any other American business office," a member of the staff commented the other day. It is not the sort of remark one usually hears made by members of the highly privileged *corps diplomatique*.

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WHEN BRITAIN HELD SICILY

A Little-known Mediterranean Episode

IT is not often remembered that the British held Sicily for a considerable number of years during the Napoleonic Wars—in fact, there is a general omission of all reference to it in many books reputing to give the general story of Sicily. Yet the British occupation was never forgotten by Napoleon, to whom it was a very painful thorn.

England had first taken Naples and Sicily under her protection after Bonaparte's expedition to Egypt in 1798. Nelson was ordered to proceed to Naples, where he was rapturously received by the King and Queen after his destruction of the French fleet in Aboukir Bay. It was then that he met for the first time Lady Hamilton, wife of the British Ambassador, at that time in the fullness of her beauty so often painted by Romney. French troops arriving in great force obliged the King and Queen and their entourage to seek refuge on Nelson's ships, whence they were conveyed to Sicily—the other part of their kingdom. Nelson remained with them at Palermo, infatuated by the charms of Lady Hamilton, though he was by no means unobservant of the follies and wasteful extravagance of the Court. At the Peace of Amiens in 1802 King Ferdinand returned to Naples, where he was warmly welcomed by his subjects in spite of his lack of all the qualities deserving of respect. He was both tyrannical and cruel, incapable of keeping his word, and a conspicuous coward in moments of danger. His Queen, the sister of Marie Antoinette, was a dangerous Consort, encouraging him in repression, fearing any kind of reform after the death of her sister at the hands of the French revolutionaries.

The Peace of Amiens had been a great triumph for Napoleon, who greatly desired a period of rest in which to mature his plans for further conquest, but there was no stability about it as the English were always conscious of bad faith. It had only lasted for fourteen months when England, to Napoleon's great wrath, again declared war, and proceeded to retake the French colonies restored at the Treaty. Napoleon began plans for the invasion of England, proceeded from that failure to success in Germany, and then to make himself Emperor in 1804 and to crown himself King of Italy at Milan in 1805.

OCCUPIED BY BRITAIN DURING THE WAR WITH NAPOLEON: The Island of Sicily, as part of the Kingdom of Naples, was held by Britain, with Lord William Bentinck as Governor, during the years 1811 to 1814

"My ambition turns wholly to Italy. She is a mistress whose favours I will share with no one. I will have all the Adriatic. The Pope shall be my vassal and I will conquer Sicily." Napoleon, in these words, announced his great ambition to hold the Mediterranean as the starting-point for his great eastern projects. He sent his brother, Joseph, with a powerful army to Naples, which soon forced the King and Queen to return to Sicily, where they were again protected by the British, who held the island in spite of all Napoleon's boasting. They kept firm hold from 1806 till 1815, when all fear of the Emperor's vast schemes of domination was at an end.

Lord William Bentinck became Governor of the island, after the British Government had been obliged to depose Ferdinand, whose shifty character rendered him impossible at such a crucial time. He was allowed to remain in Sicily, but Queen Maria Carolina proved so troublesome that she was exiled. Many reforms were introduced by Bentinck, who gained the sympathy of the Sicilian people and was long remembered by them.

But in 1806 there seemed every likelihood of the fulfilment of Napoleon's desires. Fox was now in the Ministry, and he was prepared to come to an understanding with France if only the Emperor could be trusted. Talleyrand went so far as to say: "You hold Sicily; we do not ask it of you," but Napoleon refused to yield upon that question, as he wanted it for his brother Joseph. As negotiations went on, Fox came to the melancholy conclusion that it was impossible to have faith in the French. "It is not Sicily, but the shuffling, insincere way in which they act that shows me that they are playing a false game." He died saddened at the failure of all the high hopes he had had of the Revolution in France.

The English forces in Sicily meanwhile had determined to be ready for French action by a surprise attack themselves. Sir John Stuart, with an army of 5,000 men, crossed over to the mainland and, to the surprise of the enemy, defeated a fine force of crack French troops, 7,000 strong, under Reynier at Maida. In less than an hour the British bayonets had driven the French into retreat, with half their number lying upon the field of battle.

This success, though a slight affair compared to the great battles, brought renewed prestige to the British Army, and gave hope to Europe of possible victory over the hitherto irresistible French armies. General Massena hastened to support Joseph Bonaparte in such force that Stuart had to return to Sicily with his army, but his work had been done. Sicily was no longer considered a prize to be easily captured. Napoleon continued to write to his amiable, but somewhat lazy brother, to rule with firmness, punishing the Calabrian rebels with severity to keep "above all, on the plans for conquering Sicily"—but he never succeeded in landing French troops on the island he so much desired, whereby he would gain control of the Mediterranean—"the constant aim of my policy."

In so far as Hitler has now large air forces already in Sicily, and the prospect of German troops arriving there in support, he has achieved something which his greater forerunner in the conquest of Europe failed to attain.

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Capital paid up	15,158,621
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Acceptances and Confirmed Credits	4,797,146
Engagements	9,351,644
ASSETS	
Coin, Notes and Balances with Bank of England	69,527,197
Balances with, and Cheques on other Banks	21,974,434
Money at Call and Short Notice	26,069,553
Bills Discounted (British Treasury Bills £48,048,384)	57,641,734
Treasury Deposit Receipts	67,500,000
Investments	156,686,506
Advances and other Accounts	188,083,067
Liabilities of Customers for Acceptances, etc.	14,148,790
Bank Premises	9,613,124
Shares in Yorkshire Penny Bank Ltd.	937,500
Shares in Affiliated Companies:	
Belfast Banking Co. Ltd. / The Clydesdale Bank Ltd. / North of Scotland Bank Ltd. / Midland Bank Executor and Trustee Co. Ltd.	8,199,732

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The World of Books—By Vernon Fane

LONDONERS WOULD RATHER FORGET!

A Growl from a "Blitzed" Londoner; Alfred Neumann's and Evan John's Historical Novels; A New Detective and A Tough Guy

MR. NEGLEY FARSON recently returned from an east-to-west trip across Central Africa which he described in a book called *Behind God's Back*. Using the now familiar technique of the peripatetic journalist, he made it clear that he was seeking information rather than adventure, and was fortunate enough to secure a full measure of both.

It was a good book; deservedly successful, and a worthy successor to *The Way of a Transgressor*.

Ever since an American foreign correspondent discovered that his movements among the storm centres of the world, spiced with bits of his personal history, and with his views upon politics as and where he found them, would make a best-seller (and even command a hefty sum for the movie rights), these kinds of books have fallen thick and fast from the typewriters. The libraries were filled with the political interpretations and adventures of a score of *prima donna* reporters. And not all of them were American.

The foreign correspondent has now turned war correspondent. He lives slightly more dangerously; he writes that much more sensationally. Remembering what he made of the Spanish civil war, one can only guess what he is up to in this one.

Fresh from his African adventures, Mr. Negley Farson came to study London in the *Blitzkrieg*. **BOMBER'S MOON** (Gollancz. 8s. 6d.) is the result. Mr. Farson has a genius for titles.

Now I am not denying that hundreds of thousands of us apparently got a kick out of the descriptions of the heroic sufferings of the Chinese, the Spaniards, the Czechs, the Austrians, and so on. Whether the Chinese, etc., enjoyed their write-up quite so much I take leave to doubt. It might have been an error of taste to have expected them to.

No one but a blockhead, said Dr. Johnson, writes a book except to make money. To whom is *Bomber's Moon* being offered for sale? To the people of Great Britain. There are seven million-odd people in London. Several million more, in other cities, have also been "blitzed."

Does Mr. Farson suppose that any of them *want* to live through those nights again, even though tempered by his extremely sympathetic observations? Does he think that one of them may be stirred by anything but acute embarrassment because he tells us that a neutral diplomat said to him: "These people beat me! I've never seen such an exhibition of guts in my life. And the amazing thing of it is—you see it *everywhere*!" Personally, I can see no reason why they should sell their amazement to us at 8s. 6d. net.

I suppose I shall be told that I should be grateful to Mr. Farson for his generous appreciation of some of the qualities he has discovered in us, and to Mr. Tom Purvis for his forty-eight illustrations. Well, I am not. I just happen to be a Londoner who hasn't missed any of the experiences he so vividly describes, and who, like the rest of us, could add a lot he has missed.

It is reasonable to suppose that **THE FRIENDS OF THE PEOPLE** (Hutchinson. 10s. 6d.), by Alfred Neumann, now published in translation by Countess Nora Wydenbruck, was written before the collapse of France. Certainly this passage, taken from the early part of the book, must have been:—

"'*Vive la France* . . .'" murmured Clemenceau and gazed thoughtfully at the grey, stony sky. "I must quote your own words, Rochefort, words you said in the lantern-period—what did you say? 'A rhyme for la France—and I could find but one, one only: *souffrance*'."

Could the author have foreseen the tragic significance of that quotation to-day? Could he have known that in supplying another rhyme, through Louise Michel, he would stir the hearts of every civilised man and woman to-day? For the word is *espérance*.

The hero of this novel is a sixteen-year-old apprentice, Pierre Cagnoncle; the heroine the beautiful Leonie Léon. The thread of their romance runs strongly and insistently through the story and is told with exquisite restraint, in contrast with the treatment of such powerful personalities as Clemenceau, Rochefort, Gambetta and Paul Verlaine, all of whom come vigorously alive and play their parts in the violent action.

For this is a novel of the martyrdom of Paris. Paris under siege; under bombardment; under the rack and ruin of the Commune.

The Second Empire was tottering to its fall. The boy Pierre had, amid the plaudits of the crowd, hammered to pieces the Imperial Crown of gilded plaster which had proclaimed to the world that his master was a purveyor to the Imperial Court. Vive Gambetta! greeted a banner bearing the inscription, "73 batallion, 6 company, 12 arrondissement," followed by fifes and drums. There was a riot.

"An under-sized civilian who looked like a Tartar and wore an unkempt dark moustache" was in the thick of it. He was Dr. Georges Clemenceau, Mayor of Montmartre.

And on the black day when the Prussians made a triumphal avenue of the street called with such terrible irony after the fields of Elysium, Paris had retired behind its barricades; was as a "corpse that could neither hear nor feel. It had buried itself, with black flags, blind houses, dead fountains, shrouded statues and the silence and emptiness of the grave."

It is Pierre's story; Pierre's and Leonie's; but in the climax of the Terror the last word is with the Poet. Which is as it should be, for in Paul Verlaine the author has created a literary portrait which shines forth as a masterpiece in a work of genius.

KING'S MASQUE (Heinemann. 8s. 6d.) is also an historical novel, by the author of that phenomenally successful *Crippled Splendour*, Mr. Evan John.

The book opens at Yorktown, with Rochambeau, La Fayette, and a young Swede, Axel von Fersen, in the centre of the action. Swiftly it moves to Versailles, to the Court of Marie Antoinette. To that Court comes Gustav III., King of Sweden. Here the love-story of Marie Antoinette and Fersen begins to take shape.

All the famous figures of the period are there to take a hand in it, but the focus is also upon Gustav, and there are long periods when the action shifts to Scandinavia.

Mr. Evan John does not succeed with much more than a conventional portrait of Marie Antoinette, nor does he add much to the well-known story of the affair with Fersen. With Gustav he breaks less familiar ground, and it may be that he intended the novel to frame his portrait of that remarkable character. It is done very competently, but somehow it does not succeed. Perhaps it is a too meticulous attention to detail; perhaps, in the pursuance of historical accuracy, Mr. John mislays his emphasis and crowds his canvas. Perhaps he is too anxious to use the technique of sudden shifts of scene which seem to be unrelated, until, a little too late, their true purport becomes apparent.

I am sorry that the effect of the book as a whole should be so disappointing, and in fairness I ought to add that my view of it is not shared by the Book Society, whose distinguished committee have made it their current choice.

On the lighter side of fiction I can recommend **SURFEIT OF LAMPREYS**, by Ngaio Marsh (The Crime Club. 8s. 6d.).

There are a lot of Lampreys in this story. Ten of them, in fact. Hence the surfeit. It opens in New Zealand, where Lord Charles Lamprey lived on the lower slope of Little Mount Silver, calling his house Deepacres, thereby revealing a nostalgic yearning for the Lamprey's estate in Kent. The scene moves to London. Death of a Peer. Family rows galore. Enter Detective-Inspector Fox and a posse of sergeants and constables. Watch Uncle G.

Miss Marsh has the true story-telling gift as well as a command of all those other ingenuities which are the essential equipment of the modern detective-story writer. She is as good as the best of 'em—Christie; Sayers; Allingham. How these ladies do run to crime!

Finally, for those who can take it, the roughest, toughest book by far, in this week's batch, is **THE GHOST KNOWS HIS GREENGAGES**, by H. B. Saxe (Constable. 7s. 6d.).

Mr. Saxe has evidently set out to make Damon Runyon read like a Sunday school tract. He might be an American, too, though I suspect he is not. The scene is London; the action swift, violent and as dramatic as the underworld can be. The Ghost is a real tough guy. He knows his greengages all right. Here is a sample of the style:—"I steps forward, and with all the will in the world, I busts the fat, oily rat a peacherino smack in the puss. He staggers back zig-zag for a couple of yards, teeters on his heels for a second, and then falls backwards right on top of the floozie who high-hatted me."

Yes, Mr. Saxe is a guy who sure knows his caraway seeds.

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In Quest of Good Hotels

By ASHLEY COURTENAY

TRAVELLING these days is the reverse of being a joy-ride. The few who can still use the roads are faced with limitations of petrol and lighting restrictions. And, whilst locals are mostly helpful as substitutes for sign-posts, I suspect some of feigning crass stupidity or wilfully misleading one; for, after all, we are strangers and so are suspect.

And those who have to use the rail-road recognise that to travel hopefully is to arrive. We stamp our feet on cold platforms for a train which may be an hour or more late. We find crowded trains, inability to get a meal, stops at stations which we have never heard of. And after black-out time there is nothing on our branch line to indicate our station. Yet we accept this war-time situation cheerfully because the Press and the wireless have given us valid reasons why we cannot expect peace-time conditions.

But what a different picture when we arrive at our hotels! We hand in our ration-books to the management and they do the rest. We have hot water, heat and light galore without having to worry ourselves about cost or supply. Yet what a grouse goes up in the lounge when the marmalade gives out! Being in the privileged position of knowing much of the hotel-keeper's war-time difficulties, I sometimes wish that the lounge-room carpet would turn into a magic one and transport bodily its petted occupants to a Tube shelter, an Army billet, a destroyer in the North Sea, or on to a night bomber, for little do some of them realise how fortunate they are.

Of course there will always be a hotel grumbler, who, from his reserved chair, is never happier than when he is airing his views, but the great majority of hotel residents are responsive to intelligent explanation, and it is high time that the principal hotel associations took steps collectively to educate the public on the growing difficulties of hotel management. And at the same time put the grousers in their place.

Meanwhile, hotel proprietors can act individually, and if I was an hotelier I would take energetic steps to see that my visitors not only appreciated my difficulties but co-operated in minimising them. For perhaps for the first time in hotel history the demand exceeds the supply. For years the public have been able to browbeat the poor hotelier, but now the boot is on the other leg, and I should see to it that the boot remained there by building up goodwill by the elimination of grumblers.

My first step would be to notify all who wish to reserve accommodation that, given room, I could only take them for a stated period, or, if indefinitely, that seven days' notice must be given on either side. Then I would enclose a little printed card, a replica of another to be prominently displayed by my reception office. It would read: "No room at this hotel for grumblers." A case of forewarning!

Then, to counteract the activities of the arch-grumbler, who had already installed him- or herself, I should issue the following notice, and place it on every table in the dining-room—and what a chattering over the coffee-cups would ensue!

IF

IF you are proclaiming that "They must be coining money," we should welcome your investment, however small. Ask to see the Management.

IF you think that we are overcharging have a talk with our Accountant. They tell us that the day is coming when we must *increase* our charges.

IF you are telling your fellow-guests "that it is all nonsense our not being able to supply regularly marmalade" and other peace-time luxuries, please purchase us a supply sufficient for all. We shall be happy to refund you.

IF you are complaining that the service is slow, please remember that many of our regular staff are engaged in *War Service*, and staff problems will increase rather than decrease. Particulars of our "Help Yourself Society" from the Reception Office.

IF you think you are in a safe area, your thoughts may be rudely shaken unless you adhere strictly to our Black-out regulations.

IF the public rooms are too hot or too cold, remember that you can regulate the heat in your bedroom.

IF we cannot give you satisfaction, please give us notice. There is no room in this hotel for grumblers in war-time, though we always welcome constructive criticism.

My "Help Yourself" leaflet would be calculated to smooth out difficulties and make for co-operation. It would be phrased something on these lines:

HELP YOURSELF.

You can help yourself, and us, by understanding our war-time problems—Staff, Supplies, Rising Costs, Black-out Regulations, Government Forms and Returns to be filled in. Though we have little spare time we shall be happy to discuss our problems with you. Meanwhile, you can help yourself by thinking twice before you ring the bell. Bedroom Service is difficult so please keep your own room as tidy as possible, make sheets and towels last twice as long. And, above all, please do not waste light, heat or water.

In the dining-room help yourself to quicker service by choosing from the menu before the waiter arrives, and please don't change your mind or be fussy. *We* have to take what is given *us*.

In the public rooms help yourself by being tidy. Help us by not wasting paper, and help the hall porter or reception staff by not asking them to do anything that you cannot do yourself.

Help yourself by helping the staff. Don't be mean or over-generous with tips: work on the lines of 10 per cent. on your weekly bill and you can't go wrong.

Help yourself by refusing to listen to grumblers. Tell them to come and see us. They rarely dare!

We want you to so enjoy your stay in our hotel that you will come back again and stay with us in happier days, so if you will help yourself as much as possible, it will help us to help you.

If I have had more than my usual dig this week at those few discontents who tend, if not suppressed, to leaven the whole lot, it is because this war presents a unique opportunity of bringing the good hotel-keeper and the good hotel-seeker together.

Like onlookers at a football match, one sees all the players from the touch-line, and in the rival sides there is always good and bad.

Mr. Ashley Courtenay is always pleased to advise "Sphere" readers of hotels, both large and small, known to him personally. Letters, accompanied by a 2½d. stamp for reply, should be addressed to him, c/o the Editor, THE SPHERE, *32-34, St. Bride Street, London, E.C.4. Personal and telephone inquiries, however, cannot be accepted.*

THE SHAFTESBURY HOMES AND "ARETHUSA" TRAINING SHIP

The Committee have just learned that one Old Boy has been awarded the D.S.M. for his bravery while in H.M.S. *Exeter*. Although wounded at the start of the action, he remained at his station until all torpedoes were fired. He then formed parties to deal with fires on deck and help the wounded. After the action he worked unceasingly in repairing damaged circuits, and his cheerfulness throughout was a great encouragement to all who worked with him. He had his first start in the *Arethusa*. Will you send a gift to give another boy a "first start"? Who knows what the result may be? Please address your gift: 164, Shaftesbury Avenue, London, W.C.2.

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This periodical is sold subject to the following conditions, namely, that it shall not, without the written consent of the publishers first given, be lent, resold, hired out or otherwise disposed of by way of Trade except at the full retail price of 1s.; and that it shall not be lent, resold, hired out or otherwise disposed of in a mutilated condition or in any unauthorised cover by way of Trade; or affixed to or as a part of any publication or advertising, literary or pictorial matter whatsoever.

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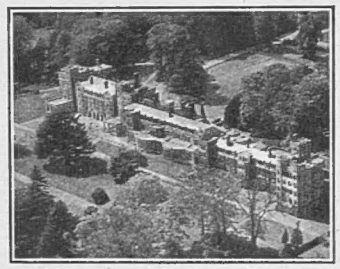

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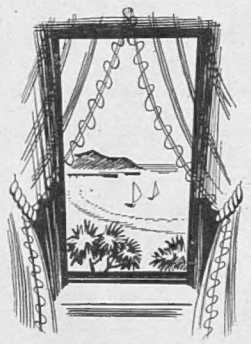

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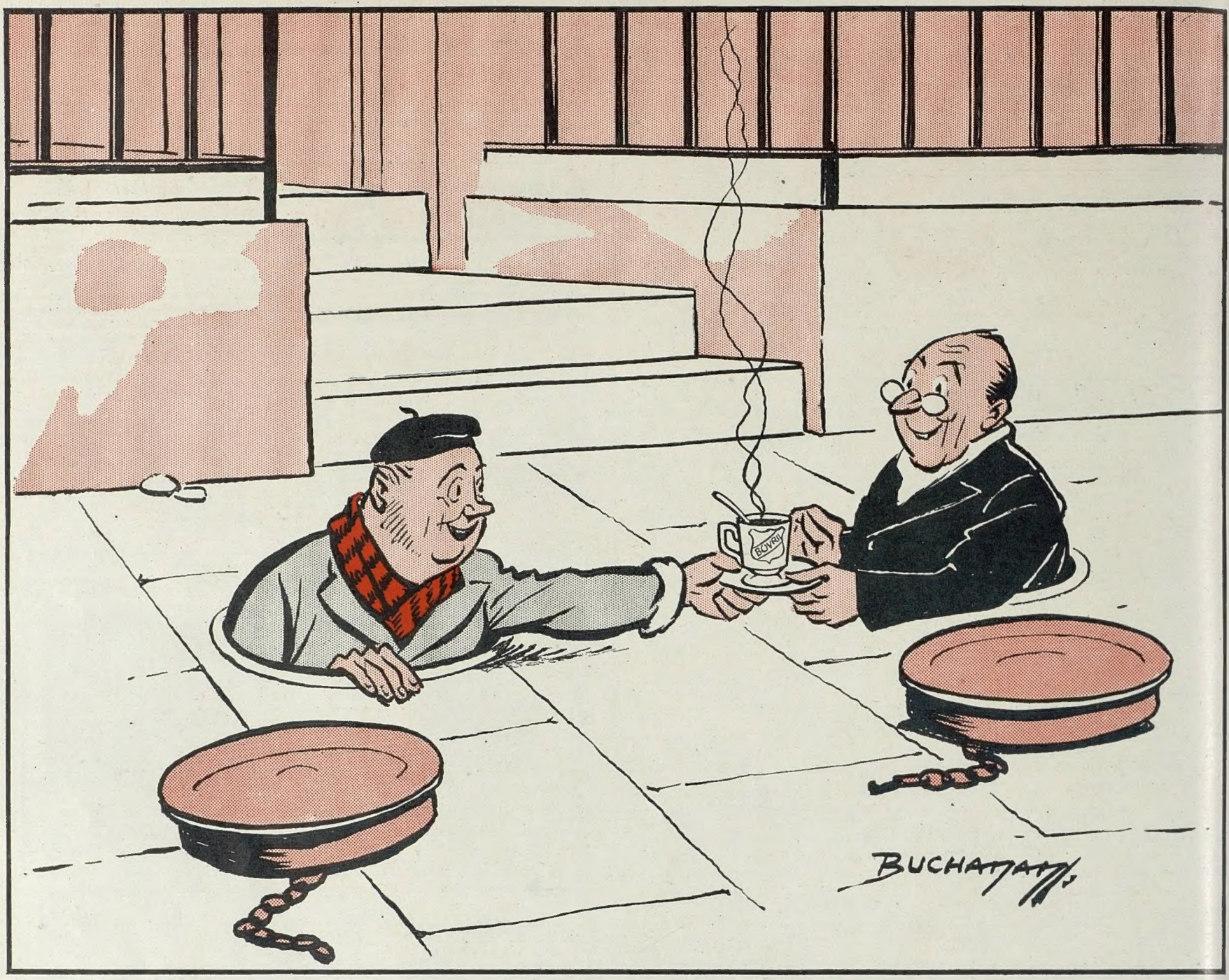

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